

# SUPPLEMENTAL MATERIALS

## Data and text mining

### NLPCORE – Computer Aided Discovery of Annotations of Bioentities and their Relationships in Articles

Varun Mittal, Alexander V. Ratushny, John D. Aitchison and Naveen Garg

#### Abstract

**Summary:** NLPCORE is a life sciences researchers' workbench built upon a deep neural network search technology that provides contextually relevant biomaterials, their interactions and references to advance fundamental research, drug discovery, or personalized healthcare recommendations. Using NLPCORE's intuitive color-coded visualizations, filters, and self-pruning graphs, researchers identify relevant bioentities and their relationships in published literature to establish well-informed hypotheses for their experiments. We evaluated NLPCORE performance to find known protein-protein and experimentally discovered host gene-virus interactions in a high throughput manner using nearly 1.25 million PubMed Central Open Access articles. NLPCORE discovered selected interactions with >99% recall rate searching 5 levels deep in its network graph. We present our methods and validation results here in these Supplementary Materials.

**Availability:** <http://www.nlpcore.com>

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## 1 METHODS: NLPCORE TECHNOLOGY

NLPCORE employs a unique deep neural network technology to identify meaningful relationships. Despite great advances in text mining techniques, classification aids (Kim et al. 2003) and frameworks (Settles 2005), there remains a large gap primarily attributed to training datasets that require labor intensive manual curation. In addition, many clustering or classification approaches using simple grammar rules falter on research papers written in a more complex scientific vocabulary. Another challenge is the uneven distribution of concepts. A standard text mining approach may expose relations around the known biological terms referenced in an article but might not iterate beyond to a greater depth. This results in most of the discovered relations to be biased towards trained and known dataset. Instead, NLPCORE creates a deep neural network (Craven and Shavlik 1997) of linguistically (parts of speech - noun, pronoun, verb, adjective, adverb, etc.) and statistically (term frequencies, proximity scores, distribution of terms across corpus and across one another, etc.) relevant phrases (Fig. 1). It is inherently designed to be corpus agnostic and we can traverse it deeply at search time without a significant compute cost.

We have improved all our components algorithmically as well as environmentally (e.g. exploit GPU). To begin with Part of speech tagger has been significantly improved to work across compound and complex sentences to extract meaningful concepts (Fig. 2) using their part of speech significance as well as colocation and distribution frequencies across the entire corpus.

We have deployed various statistical models to compute relevance across concepts in an article and across the entire corpus. Having concepts in a graph database allows us to change or re-compute these models at relatively low cost dynamically. One such model (Liu and Yang 2011) is to recog-

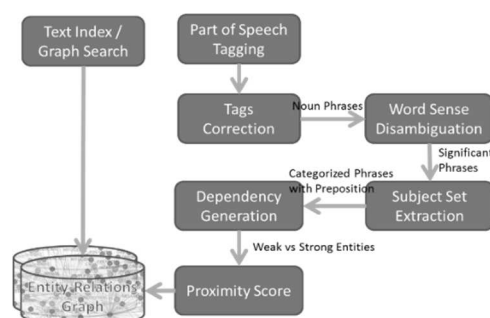


Fig. 1 Entity Relationship Graph Construction and Search

This was evidenced by (a) downregulation of miR-451 leads to the increased metabolism of DOX ; (b) downregulation of miR-328 results in increased mitoxantrone sensitivity ; and (c) Overexpression of miR-221 and miR-222 in MCF-7 cells confers resistance to tamoxifen.

- downregulation: miR-451
- DOX
- downregulation: miR-328 result
- mitoxantrone sensitivity
- Overexpression: miR-221
- miR-222
- MCF-7 cell
- tamoxifen

The protein level determined by western blotting demonstrated that treatment of both LN229 and U251 cells with miR-21 inhibitor and taxol combination therapy could dramatically reduced the expression of phosphorylated Akt (p-Akt) significantly (P < 0.01) compared with either single taxol chemotherapy or miR-21 inhibitor therapy alone.

- LN229
- U251 cell
- miR-21 inhibitor
- taxol combination therapy
- phosphorylated Akt p-Akt
- taxol chemo-therapy
- miR-21 inhibitor therapy

On each day of five consecutive days, 20 µL of MTT (0.5 mg/mL) was added to each well and the cells were incubated at 37°C for 4 h. The reaction was then stopped by lysing the cells with 200 µL of dimethyl sulfoxide (DMSO) for 15 min.

- µL
- MTT
- lysing
- µL
- sulfoxide DMSO

Fig. 2 Extracted Concepts from Complex Sentences

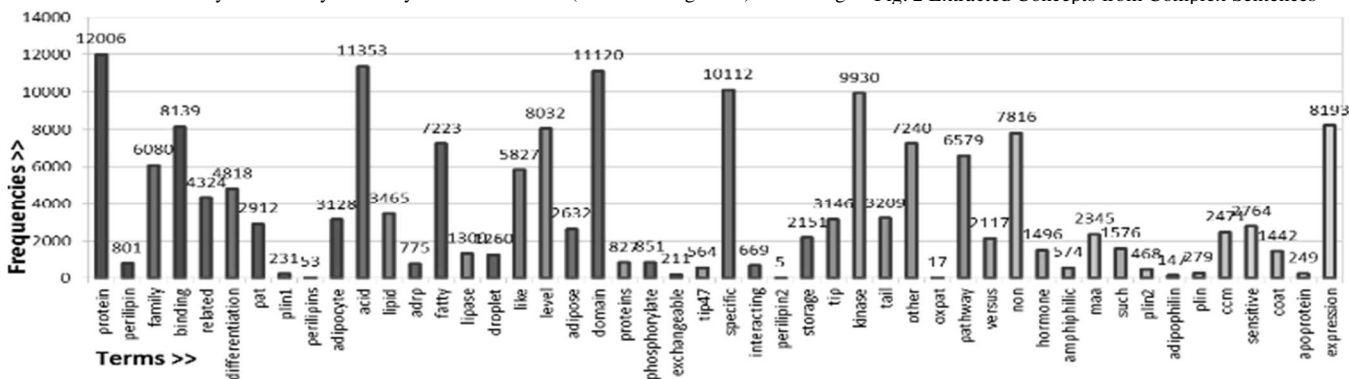


Fig. 3 Terms and their Frequencies across documents

nize a probable subject in a given text segment based on the premise that most commonly used grammatical words have a very high frequency whereas the

proper nouns have the least frequency and the words of most probable relevance have mean frequency (Fig. 3 with total and Fig. 4 with normalized frequency scores) sampled from a set of relevant articles. Some of the more complex models that we employ include Cross Entropy Loss (Boer et al. 2005) , Fidelity

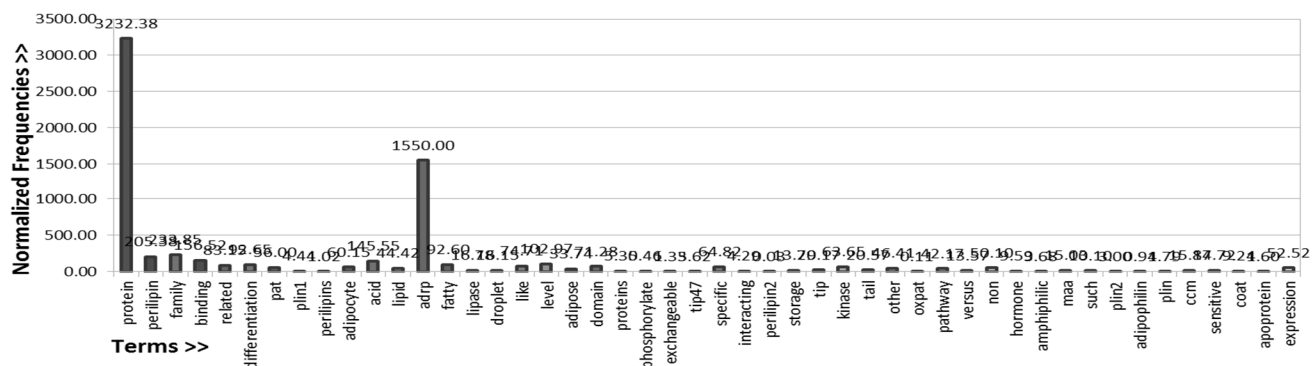


Fig. 4 Terms and their Frequencies (Normalized)

Loss (Tsai et al. 2007) and nearest neighbor probability (Rovatti and Mazzini 2008) functions.

To bring it all together, as we build and traverse our word graph, we keep track of variances (Rovatti and Mazzini 2008) amongst word relations while doing all the computations. These computations include three different types of scores.

- Local Score  

$$F(w) = \sum_1^w ((1 - \text{gap}(w)/10)/\text{gap}(w)), w \in \text{word pair from sparse matrix}$$

$$\text{gap}(w) = \text{Normalized distance for } w$$
- Aggregated Local Score  $\sum F(w)$  from the entire corpus
- Recurring Score as a count of word pairs that reappear across the network children nodes. This score helps us identify concepts and their features in deep relations as they appear frequently.  

$$\forall w \text{ in } W: \sum_i \log(\sum_j F(w)), i, j: \text{word pair}$$

These scores are computed using a queue and highly distributed worker threads. These scores are tracked across all word combinations. This scoring approach improves scores for words that are more commonly used together with their related words. Therefore, word combinations i.e. concepts that do not change frequently, often appear in the center of the graphs (in contrast with a static trained or known data-set). Using these scores across all words we extract concepts based on most relevant scores and relations. We also import and track known bioentities and their relations from specialized biodictionaries in the same graph and thereby extract related concepts to them also.

This approach efficiently tags bioentities and clusters them with known types allowing for application of additional rules and known vocabularies (Aronson and Lang 2010) and dictionaries (Barrett et al. 2013; Rappaport et al. 2014; Cherry et al. 2012; Ashburner et al. 2000; Blake et al. 2014; Smith, Williams, and Steffen 2003; Xenarios et al. 2002) to find even more interactions. The graph is also kept readily traversable with a full-text index on top. This well connected graph (Fig. 5) in NLP CORE is continually evolving with new tags, relationships, and new scores (be it linguistic attribute, proximity/term frequency, impact

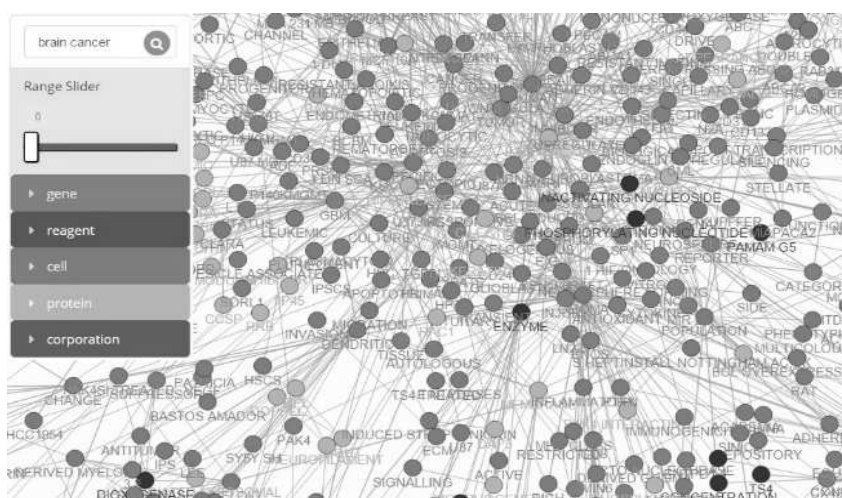


Fig. 5 Graph of Interrelated Nodes and Edges

factor or user interactions). NLP CORE can entertain various filters on entity nodes (such as properties from bio-dictionaries) and various controls on their relationship edges (such as confidence scores, publication date of articles, impact factor of journals, most linked or least linked nodes, etc.). Users therefore

can easily explore the entire search space without needing to learn new search syntax, or read through vast corpus, instead using simple filter or slider controls discover new interactions, pathways, transformation or link-ages across various bioentities, reagents and researchers.

## 2 PROTEIN-PROTEIN Interactions Validation

**AIM:** Validate NLP CORE's ability to discover known interactions and measure the recall rate.

**Test Data (Appendix 1):** Top 1116 protein-protein interactions amongst 146 commonly used (measured by their Experimental Score) proteins (Franceschini et al., 2013)

**Source Publications:** 1.25 Million PubMed Central Open Access Articles

### Experiment Performed:

Using NLP CORE's deep neural network of extracted concepts and their relationships from open access articles, we selected the connected graph for each protein pair. We then traverse the graph to find the next protein interaction counting the number of relations we had to traverse to get to the next protein. As we traverse deeper in the relationship graph, our true positive and recall rates increase substantially reaching 99% at a depth of 5 nodes with a smaller increase in false positives (Fig. 6)

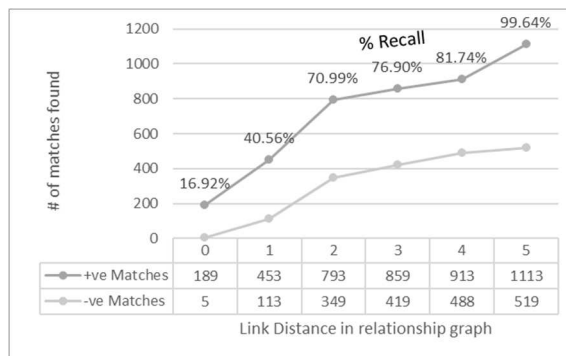


Fig. 6 Protein-Protein Interactions Discovered from graph

## 3 HOST GENE-VIRUS Interactions Validation

**Aim:** Find Gene-virus interactions from papers and comparisons

**Test Data (Appendix 2):** 1862 host gene-virus interactions and non-interactions experimentally discovered (Schoggins et al., 2014). Experimental data represent the results of the ectopic expression assay used to screen a library of over 350 human interferon-stimulated genes (ISGs) for effects on 14 DNA, positive- or negative-sense single-stranded RNA viruses. Z-scores represent virus replication values of ISG screen data sets. VV, FLUAV, MV, and RSV are vaccinia, influenza A, measles, and respiratory syncytial viruses, respectively.

### Experiment Performed:

Scores were computed looking for gene-virus pair in same document and giving a score based on distance between searched entities, to filter out interactions with large gap. Fig. 7 provides comparison of references of protein-virus interactions in terms of their published paper counts (x-axis; paper count) against the experimentally discovered host gene-virus interactions or non-interactions (y-axis, absolute values of Z-scores). Our results not only corroborate manually curated and experimental data but also bring to surface many more interactions that would have required readers to laboriously go through entire set of published articles alternatively collected using keyword searches using various combinations of protein and virus names.

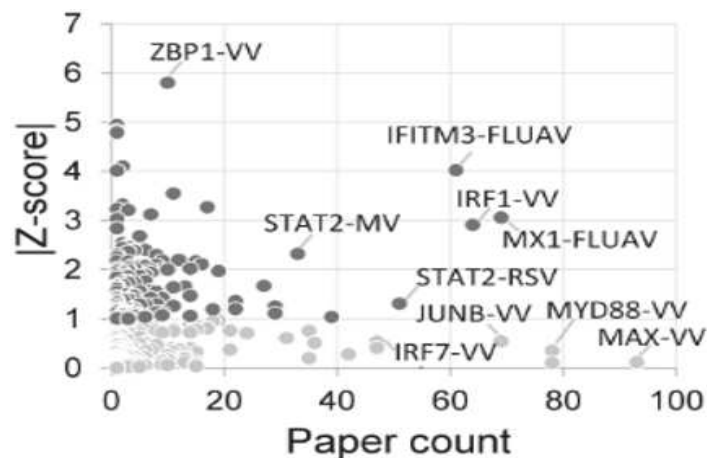


Fig. 7 Host gene-virus interactions

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## APPENDIX 1 – Top 1116 protein-protein interactions (Franceschini et al., 2013)

Protein	Protein	node1_str ing_id	node2_str ing_id	node1_external_id	node2_external_id	neigh- bor- hood	fusion	cooccure nce	homol- ogy	coexpres- sion	experi- mental	knowled ge	textmin- ing	com- bined_sc ore
ATG12	ATG5	1861647	1852683	ENSP00000425107	ENSP00000343313	0	0	0	0	0	0.999	0.9	0.998	0.999
BRCA1	BACH1	1861387	1847037	ENSP00000418960	ENSP00000286800	0	0	0	0	0	0.999	0	0	0.999
BRCA1	BARD1	1861387	1844829	ENSP00000418960	ENSP00000260947	0	0	0	0.612	0	0.999	0.9	0.825	0.999
AURKB	BIRC5	1863844	1848314	ENSP00000463999	ENSP00000301633	0	0	0	0	0.288	0.999	0.9	0.989	0.999
RAD51	BRCA2	1857551	1857163	ENSP00000372088	ENSP00000369497	0	0	0	0	0.08	0.999	0.9	0.974	0.999
CDC20	BUB1B	1849070	1847075	ENSP00000308450	ENSP00000287598	0	0	0	0	0.183	0.999	0.9	0.98	0.999
MAD2L1	BUB1B	1847745	1847075	ENSP00000296509	ENSP00000287598	0	0	0	0	0.248	0.999	0.9	0.874	0.999
BUB3	BUB1B	1854901	1847075	ENSP00000357858	ENSP00000287598	0	0	0	0	0.064	0.999	0.9	0.987	0.999
EGFR	CBL	1846445	1845465	ENSP00000275493	ENSP00000264033	0	0	0	0	0	0.999	0.9	0.876	0.999
FYN	CBL	1853081	1845465	ENSP00000346671	ENSP00000264033	0	0	0	0	0	0.999	0.9	0.757	0.999
GRB2	CBL	1852164	1845465	ENSP00000339007	ENSP00000264033	0	0	0	0	0	0.999	0.9	0.901	0.999
MET	CBL	1849944	1845465	ENSP00000317272	ENSP00000264033	0	0	0	0	0	0.999	0.9	0.561	0.999
SRC	CBL	1853652	1845465	ENSP00000350941	ENSP00000264033	0	0	0	0	0	0.999	0.9	0.833	0.999
SHC1	CBL	1860266	1845465	ENSP00000401303	ENSP00000264033	0	0	0	0	0	0.999	0.9	0.794	0.999
BUB3	CDC20	1854901	1849070	ENSP00000357858	ENSP00000308450	0	0	0	0	0.157	0.999	0.9	0.989	0.999
RBX1	CDC34	1842568	1842491	ENSP00000216225	ENSP00000215574	0	0	0	0	0.119	0.999	0	0.864	0.999
CUL4A	DDB1	1856298	1848334	ENSP00000364589	ENSP00000301764	0	0	0	0	0.112	0.999	0.9	0.96	0.999
EGFR	EGF	1846445	1845705	ENSP00000275493	ENSP00000265171	0	0	0	0	0	0.999	0.9	0.227	0.999
GRB2	EGFR	1852164	1846445	ENSP00000339007	ENSP00000275493	0	0	0	0	0	0.999	0.9	0.99	0.999
SRC	EGFR	1853652	1846445	ENSP00000350941	ENSP00000275493	0	0	0	0.703	0	0.999	0.9	0.993	0.999
SHC1	EGFR	1860266	1846445	ENSP00000401303	ENSP00000275493	0	0	0	0	0	0.999	0.9	0.989	0.999
CRY2	FBXL3	1860621	1853221	ENSP00000406751	ENSP00000347834	0	0	0	0	0	0.999	0.9	0.609	0.999
CUL1	FBXW7	1850867	1846740	ENSP00000326804	ENSP00000281708	0	0	0	0	0	0.999	0.9	0.877	0.999
JUN	FOS	1855436	1848822	ENSP00000360266	ENSP00000306245	0	0	0	0	0.168	0.999	0.9	0.998	0.999
SOS1	GRB2	1858968	1852164	ENSP00000384675	ENSP00000339007	0	0	0	0	0	0.999	0.9	0.987	0.999
SHC1	GRB2	1860266	1852164	ENSP00000401303	ENSP00000339007	0	0	0	0	0	0.999	0.9	0.995	0.999
MET	HGF	1849944	1842916	ENSP00000317272	ENSP00000222390	0	0	0	0	0	0.999	0.9	0.973	0.999
MAPK9	JUN	1859420	1855436	ENSP00000389338	ENSP00000360266	0	0	0	0	0	0.999	0.9	0.993	0.999
CTNNB1	LEF1	1852818	1845704	ENSP00000344456	ENSP00000265165	0	0	0	0	0	0.999	0.9	0.983	0.999
CDC20	MAD2L1	1849070	1847745	ENSP00000308450	ENSP00000296509	0	0	0	0	0.552	0.999	0.9	0.891	0.999
MCM7	MCM3	1848945	1843226	ENSP00000307288	ENSP00000229854	0	0	0.44	0.797	0.953	0.999	0.9	0.936	0.999
MCM2	MCM3	1845676	1843226	ENSP00000265056	ENSP00000229854	0	0	0.221	0.759	0.944	0.999	0.9	0.944	0.999
MCM6	MCM3	1845487	1843226	ENSP00000264156	ENSP00000229854	0	0	0.299	0.756	0.9	0.999	0.9	0.913	0.999
MCM4	MCM3	1845065	1843226	ENSP00000262105	ENSP00000229854	0	0	0.229	0.747	0.975	0.999	0.9	0.918	0.999
CTDP1	MED15	1848076	1845304	ENSP00000299543	ENSP00000263205	0	0	0	0	0	0.999	0	0	0.999
CDC42	PAK1	1849707	1846573	ENSP00000314458	ENSP00000278568	0	0	0	0	0	0.999	0.9	0.907	0.999
RAC1	PAK1	1853302	1846573	ENSP00000348461	ENSP00000278568	0	0	0	0	0	0.999	0.9	0.881	0.999
RFC5	PCNA	1860712	1856984	ENSP00000408295	ENSP00000368438	0.065	0	0	0	0.289	0.999	0.9	0.943	0.999

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RFC1	PCNA	1857450	1856984	ENSP00000371321	ENSP00000368438	0	0	0	0	0	0.999	0.9	0.961	0.999
RFC3	PCNA	1857148	1856984	ENSP00000369411	ENSP00000368438	0.065	0	0	0	0.761	0.999	0.9	0.95	0.999
PCNA	RAD18	1856984	1845644	ENSP00000368438	ENSP00000264926	0	0	0	0	0	0.999	0	0.872	0.999
HRAS	RAF1	1849235	1844086	ENSP00000309845	ENSP00000251849	0	0	0	0	0	0.999	0.9	0.985	0.999
KRAS	RAF1	1844404	1844086	ENSP00000256078	ENSP00000251849	0	0	0	0	0	0.999	0.9	0.993	0.999
HSP90A A1	RAF1	1851814	1844086	ENSP00000335153	ENSP00000251849	0	0	0	0	0	0.999	0	0.977	0.999
SUMO1	RANGA P1	1857989	1853317	ENSP00000376076	ENSP00000348577	0	0	0	0	0	0.999	0.9	0.985	0.999
SUMO2	RANGA P1	1860567	1853317	ENSP00000405965	ENSP00000348577	0	0	0	0	0	0.999	0	0.921	0.999
ASH2L	RBBP5	1852381	1845562	ENSP00000340896	ENSP00000264515	0	0	0	0	0.065	0.999	0.9	0.992	0.999
WDR5	RBBP5	1853715	1845562	ENSP00000351446	ENSP00000264515	0	0	0	0.648	0.114	0.999	0.9	0.988	0.999
CUL4A	RBX1	1856298	1842568	ENSP00000364589	ENSP00000216225	0	0	0	0	0	0.999	0.9	0.889	0.999
SKP1	RBX1	1843292	1842568	ENSP00000231487	ENSP00000216225	0	0	0	0	0.142	0.999	0.9	0.942	0.999
SKP2	RBX1	1846369	1842568	ENSP00000274255	ENSP00000216225	0	0	0	0	0	0.999	0.9	0.668	0.999
CUL1	RBX1	1850867	1842568	ENSP00000326804	ENSP00000216225	0	0	0	0	0	0.999	0.9	0.943	0.999
CRY2	SKP1	1860621	1843292	ENSP00000406751	ENSP00000231487	0	0	0	0	0.076	0.999	0	0.163	0.999
FBXL3	SKP1	1853221	1843292	ENSP00000347834	ENSP00000231487	0	0	0	0	0	0.999	0.9	0.352	0.999
FBXW7	SKP1	1846740	1843292	ENSP00000281708	ENSP00000231487	0	0	0	0	0	0.999	0.9	0.993	0.999
SKP2	SKP1	1846369	1843292	ENSP00000274255	ENSP00000231487	0	0	0	0	0	0.999	0.9	0.878	0.999
CUL1	SKP1	1850867	1843292	ENSP00000326804	ENSP00000231487	0	0	0	0	0	0.999	0.9	0.996	0.999
CKS1B	SKP2	1849378	1846369	ENSP00000311083	ENSP00000274255	0	0	0	0	0.081	0.999	0.9	0.705	0.999
CUL1	SKP2	1850867	1846369	ENSP00000326804	ENSP00000274255	0	0	0	0	0	0.999	0.9	0.899	0.999
SMAD4	SMAD1	1852473	1848770	ENSP00000341551	ENSP00000305769	0	0	0	0.832	0	0.999	0.9	0.972	0.999
SMAD4	SMAD3	1852473	1851536	ENSP00000341551	ENSP00000332973	0	0	0	0.772	0	0.999	0.9	0.994	0.999
SNF8	VPS25	1861527	1844251	ENSP00000421380	ENSP00000253794	0	0	0	0	0.181	0.999	0.9	0.991	0.999
VPS36	VPS25	1856803	1844251	ENSP00000367299	ENSP00000253794	0	0	0	0	0.132	0.999	0.9	0.944	0.999
SNF8	VPS36	1861527	1856803	ENSP00000421380	ENSP00000367299	0	0	0	0	0.124	0.999	0.9	0.986	0.999
BRCA1	POLR2 A	1861387	1849743	ENSP00000418960	ENSP00000314949	0	0	0	0	0	0.999	0	0.267	0.999
CDKN2A	CDK4	1859838	1844551	ENSP00000394932	ENSP00000257904	0	0	0	0	0	0.999	0.9	0.993	0.999
CRY2	CUL1	1860621	1850867	ENSP00000406751	ENSP00000326804	0	0	0	0	0	0.999	0	0.154	0.999
CTNNB1	AXIN1	1852818	1845118	ENSP00000344456	ENSP00000262320	0	0	0	0	0	0.999	0.9	0.993	0.999
CUL4A	NEDD8	1856298	1844012	ENSP00000364589	ENSP00000250495	0	0	0	0	0	0.999	0	0.803	0.999
JUN	MAPK8	1855436	1853988	ENSP00000360266	ENSP00000353483	0	0	0	0	0	0.999	0.9	0.996	0.999
MAD2L1	MAD1L 1	1847745	1845817	ENSP00000296509	ENSP00000265854	0	0	0	0	0	0.999	0.9	0.882	0.999
MCM3	MCM5	1843226	1842548	ENSP00000229854	ENSP00000216122	0	0	0.438	0.761	0.974	0.999	0.9	0.989	0.999
MCM7	MCM2	1848945	1845676	ENSP00000307288	ENSP00000265056	0	0	0.342	0.795	0.938	0.999	0.9	0.955	0.999
MCM7	MCM4	1848945	1845065	ENSP00000307288	ENSP00000262105	0	0	0.342	0.802	0.965	0.999	0.9	0.92	0.999
MCM7	MCM5	1848945	1842548	ENSP00000307288	ENSP00000216122	0	0	0.484	0.786	0.962	0.999	0.9	0.982	0.999
MCM7	MCM6	1848945	1845487	ENSP00000307288	ENSP00000264156	0	0	0.442	0.804	0.837	0.999	0.9	0.915	0.999
MCM7	CDC6	1848945	1842453	ENSP00000307288	ENSP00000209728	0	0	0	0	0.435	0.999	0.9	0.915	0.999

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ORC1	ORC2	1855507	1843392	ENSP00000360621	ENSP00000234296	0	0	0	0	0.417	0.999	0.9	0.936	0.999
ORC1	MCM2	1855507	1845676	ENSP00000360621	ENSP00000265056	0	0	0	0	0.682	0.999	0.9	0.671	0.999
ORC1	CDC6	1855507	1842453	ENSP00000360621	ENSP00000209728	0	0	0	0.719	0.699	0.999	0.9	0.967	0.999
PCNA	RPA1	1856984	1844316	ENSP00000368438	ENSP00000254719	0	0	0	0	0.552	0.999	0.9	0.751	0.999
PCNA	RFC4	1856984	1847705	ENSP00000368438	ENSP00000296273	0.065	0	0	0	0.508	0.999	0.9	0.953	0.999
PCNA	FEN1	1856984	1848737	ENSP00000368438	ENSP00000305480	0	0	0	0	0.697	0.999	0.9	0.969	0.999
RAC1	ARHGD IA	1853302	1846084	ENSP00000348461	ENSP00000269321	0	0	0	0	0.096	0.999	0.9	0.985	0.999
RAD51	RAD52	1857551	1853694	ENSP00000372088	ENSP00000351284	0	0	0	0	0.065	0.999	0.9	0.996	0.999
RANGAP 1	UBE2I	1853317	1850693	ENSP00000348577	ENSP00000324897	0	0	0	0	0	0.999	0.9	0.978	0.999
RHOA	ARHGD IA	1860210	1846084	ENSP00000400175	ENSP00000269321	0	0	0	0	0.086	0.999	0.9	0.995	0.999
RPA2	RPA1	1856012	1844316	ENSP00000363021	ENSP00000254719	0	0	0	0	0.475	0.999	0.9	0.992	0.999
SOS1	HRAS	1858968	1849235	ENSP00000384675	ENSP00000309845	0	0	0	0	0	0.999	0.9	0.942	0.999
SUMO1	UBE2I	1857989	1850693	ENSP00000376076	ENSP00000324897	0	0	0	0	0.138	0.999	0.9	0.994	0.999
SUMO1	UBA2	1857989	1843822	ENSP00000376076	ENSP00000246548	0	0	0	0	0.108	0.999	0.9	0.982	0.999
SUMO2	UBE2I	1860567	1850693	ENSP00000405965	ENSP00000324897	0	0	0	0	0.138	0.999	0.9	0.981	0.999
CASP9	BIRC2	1851230	1843127	ENSP00000330237	ENSP00000227758	0	0	0	0	0	0.998	0.9	0.801	0.999
CUL1	CDC34	1850867	1842491	ENSP00000326804	ENSP00000215574	0	0	0	0	0	0.998	0.9	0.927	0.999
SMAD3	EP300	1851536	1845316	ENSP00000332973	ENSP00000263253	0	0	0	0	0	0.998	0.9	0.879	0.999
DDB1	RBX1	1848334	1842568	ENSP00000301764	ENSP00000216225	0	0	0	0	0	0.998	0.9	0.77	0.999
SHC1	SOS1	1860266	1858968	ENSP00000401303	ENSP00000384675	0	0	0	0	0	0.998	0.9	0.951	0.999
ORC1	MCM7	1855507	1848945	ENSP00000360621	ENSP00000307288	0	0	0	0	0.502	0.997	0.9	0.699	0.999
CTNNB1	SKP1	1852818	1843292	ENSP00000344456	ENSP00000231487	0	0	0	0	0	0.997	0.9	0.517	0.999
ORC1	MCM6	1855507	1845487	ENSP00000360621	ENSP00000264156	0	0	0	0	0.489	0.997	0.9	0.665	0.999
ORC1	MCM4	1855507	1845065	ENSP00000360621	ENSP00000262105	0	0	0	0	0.551	0.997	0.9	0.69	0.999
ATG12	ATG7	1861647	1853051	ENSP00000425107	ENSP00000346437	0	0	0	0	0	0.996	0.8	0.992	0.999
LCK	CBL	1852042	1845465	ENSP00000337825	ENSP00000264033	0	0	0	0	0	0.996	0.9	0.723	0.999
CREB1	EP300	1859295	1845316	ENSP00000387699	ENSP00000263253	0	0	0	0	0	0.996	0.9	0.99	0.999
JUN	EP300	1855436	1845316	ENSP00000360266	ENSP00000263253	0	0	0	0	0	0.996	0.9	0.78	0.999
CDC42	PAK2	1849707	1849679	ENSP00000314458	ENSP00000314067	0	0	0	0	0	0.996	0.9	0.889	0.999
NTRK1	SHC1	1861874	1860266	ENSP00000431418	ENSP00000401303	0	0	0	0	0	0.996	0.9	0.928	0.999
SOS1	EGFR	1858968	1846445	ENSP00000384675	ENSP00000275493	0	0	0	0	0	0.995	0.9	0.687	0.999
BRCA1	RAD51	1861387	1857551	ENSP00000418960	ENSP00000372088	0	0	0	0	0	0.995	0.9	0.779	0.999
FBXW7	RBX1	1846740	1842568	ENSP00000281708	ENSP00000216225	0	0	0	0	0	0.995	0.9	0.843	0.999
CKS1B	SKP1	1849378	1843292	ENSP00000311083	ENSP00000231487	0	0	0	0	0	0.995	0.9	0.674	0.999
PCNA	CDT1	1856984	1848231	ENSP00000368438	ENSP00000301019	0	0	0	0	0.17	0.994	0.9	0.811	0.999
BRCA1	CHEK2	1861387	1857546	ENSP00000418960	ENSP00000372023	0	0	0	0	0	0.992	0.9	0.973	0.999
SMAD1	EP300	1848770	1845316	ENSP00000305769	ENSP00000263253	0	0	0	0	0	0.992	0	0.741	0.998
ORC2	MCM3	1843392	1843226	ENSP00000234296	ENSP00000229854	0	0	0	0	0.487	0.991	0.9	0.349	0.999
CDT1	CDC6	1848231	1842453	ENSP00000301019	ENSP00000209728	0	0	0	0	0.904	0.991	0.9	0.974	0.999
ORC1	MCM5	1855507	1842548	ENSP00000360621	ENSP00000216122	0	0	0	0	0.736	0.991	0.9	0.664	0.999

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HSP90A A1	EGFR	1851814	1846445	ENSP00000335153	ENSP00000275493	0	0	0	0	0	0.99	0.9	0.932	0.999
GRB2	MET	1852164	1849944	ENSP00000339007	ENSP00000317272	0	0	0	0	0	0.988	0.9	0.936	0.999
NEDD8	RBX1	1844012	1842568	ENSP00000250495	ENSP00000216225	0	0	0	0	0.254	0.987	0.9	0.868	0.999
CDT1	MCM6	1848231	1845487	ENSP00000301019	ENSP00000264156	0	0	0	0	0.502	0.987	0.9	0.522	0.999
RAD51	RPA1	1857551	1844316	ENSP00000372088	ENSP00000254719	0.09	0	0	0	0.112	0.987	0.9	0.733	0.999
DDB1	CRBN	1848334	1843306	ENSP00000301764	ENSP00000231948	0	0	0	0	0	0.986	0.9	0.684	0.999
FOS	JUND	1848822	1844164	ENSP00000306245	ENSP00000252818	0	0	0	0	0.168	0.986	0.9	0.996	0.999
SUMO1	SMAD4	1857989	1852473	ENSP00000376076	ENSP00000341551	0	0	0	0	0	0.985	0	0.882	0.998
FBXW7	CDC34	1846740	1842491	ENSP00000281708	ENSP00000215574	0	0	0	0	0	0.984	0.9	0.985	0.999
RAC1	PAK2	1853302	1849679	ENSP00000348461	ENSP00000314067	0	0	0	0	0	0.984	0.9	0.853	0.999
RPA2	RAD52	1856012	1853694	ENSP00000363021	ENSP00000351284	0	0	0	0	0	0.984	0.9	0.862	0.999
BRCA1	EP300	1861387	1845316	ENSP00000418960	ENSP00000263253	0	0	0	0	0	0.983	0	0.568	0.992
JUN	SMAD3	1855436	1851536	ENSP00000360266	ENSP00000332973	0	0	0	0	0	0.983	0.9	0.96	0.999
SMAD4	EP300	1852473	1845316	ENSP00000341551	ENSP00000263253	0	0	0	0	0	0.982	0.9	0.937	0.999
MAPK8	JUND	1853988	1844164	ENSP00000353483	ENSP00000252818	0	0	0	0	0	0.982	0.9	0.983	0.999
SUMO1	PCNA	1857989	1856984	ENSP00000376076	ENSP00000368438	0	0	0	0	0.178	0.982	0	0.646	0.994
CDT1	SKP2	1848231	1846369	ENSP00000301019	ENSP00000274255	0	0	0	0	0.224	0.982	0	0.719	0.995
MEF2A	EP300	1853046	1845316	ENSP00000346389	ENSP00000263253	0	0	0	0	0	0.98	0.9	0.571	0.999
CDC42	ARHGD IA	1849707	1846084	ENSP00000314458	ENSP00000269321	0	0	0	0	0.071	0.98	0.9	0.989	0.999
RPA2	MCM3	1856012	1843226	ENSP00000363021	ENSP00000229854	0	0	0	0	0.486	0.978	0.9	0.376	0.999
CASP9	BIRC3	1851230	1845359	ENSP00000330237	ENSP00000263464	0	0	0	0	0	0.976	0.9	0.797	0.999
SUMO1	RAD51	1857989	1857551	ENSP00000376076	ENSP00000372088	0	0	0	0	0	0.974	0	0.404	0.984
CACYBP	SKP1	1854646	1843292	ENSP00000356652	ENSP00000231487	0	0	0	0	0.132	0.973	0	0.4	0.984
GGA1	ARF1	1852447	1846224	ENSP00000341344	ENSP00000272102	0	0	0	0	0	0.972	0	0.831	0.995
SUMO2	SUMO1	1860567	1857989	ENSP00000405965	ENSP00000376076	0	0	0	0.927	0.071	0.972	0.9	0.973	0.997
RUVBL2	CTNNB 1	1864926	1852818	ENSP00000473172	ENSP00000344456	0	0	0	0	0	0.969	0.9	0.369	0.997
CACYBP	CTNNB 1	1854646	1852818	ENSP00000356652	ENSP00000344456	0	0	0	0	0	0.964	0.72	0.243	0.991
RAD51	UBE2I	1857551	1850693	ENSP00000372088	ENSP00000324897	0	0	0	0	0.084	0.963	0	0.97	0.998
GGA1	BACE1	1852447	1850057	ENSP00000341344	ENSP00000318585	0	0	0	0	0	0.962	0	0.899	0.996
PCNA	EP300	1856984	1845316	ENSP00000368438	ENSP00000263253	0	0	0	0	0	0.962	0	0.534	0.981
MAPK9	JUND	1859420	1844164	ENSP00000389338	ENSP00000252818	0	0	0	0	0	0.962	0.9	0.898	0.999
SKP2	CDC34	1846369	1842491	ENSP00000274255	ENSP00000215574	0	0	0	0	0	0.961	0.9	0.504	0.997
CTNNB1	EP300	1852818	1845316	ENSP00000344456	ENSP00000263253	0	0	0	0	0	0.961	0.9	0.851	0.999
CEBPB	SMARCA2	1848728	1845805	ENSP00000305422	ENSP00000265773	0	0	0	0	0	0.961	0.9	0.283	0.997
CTNNB1	SMAD3	1852818	1851536	ENSP00000344456	ENSP00000332973	0	0	0	0	0	0.96	0	0.851	0.993
CTNNB1	EGFR	1852818	1846445	ENSP00000344456	ENSP00000275493	0	0	0	0	0	0.958	0.9	0.922	0.999
MCM7	ORC2	1848945	1843392	ENSP00000307288	ENSP00000234296	0	0	0	0	0.446	0.958	0.9	0.558	0.998
PCNA	APEX1	1856984	1842615	ENSP00000368438	ENSP00000216714	0	0	0	0	0.282	0.958	0	0.68	0.989
MET	EGFR	1849944	1846445	ENSP00000317272	ENSP00000275493	0	0	0	0.634	0	0.955	0	0.974	0.972

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MCM3	CDC6	1843226	1842453	ENSP00000229854	ENSP00000209728	0	0	0	0	0.473	0.955	0.9	0.889	0.999
FBXW7	CDC6	1846740	1842453	ENSP00000281708	ENSP00000209728	0	0	0	0	0	0.954	0	0.844	0.992
MCM7	RPA1	1848945	1844316	ENSP00000307288	ENSP00000254719	0	0	0	0	0.289	0.952	0.9	0.434	0.997
BUB3	MAD2L1	1854901	1847745	ENSP00000357858	ENSP00000296509	0	0	0	0	0.184	0.95	0.9	0.837	0.999
ORC1	MCM3	1855507	1843226	ENSP00000360621	ENSP00000229854	0	0	0	0	0.689	0.95	0.9	0.656	0.999
RAD52	RAD18	1853694	1845644	ENSP00000351284	ENSP00000264926	0	0	0	0	0	0.95	0	0.885	0.994
CNOT4	PSMD4	1862294	1854905	ENSP00000445508	ENSP00000357879	0	0	0	0	0.076	0.95	0	0.067	0.953
CNOT4	PSMD7	1862294	1842741	ENSP00000445508	ENSP00000219313	0	0	0	0	0	0.95	0	0.16	0.956
PCNA	RAD52	1856984	1853694	ENSP00000368438	ENSP00000351284	0	0	0	0	0	0.95	0	0.769	0.987
SRC	GRB2	1853652	1852164	ENSP00000350941	ENSP00000339007	0	0	0	0.768	0.114	0.949	0.9	0.988	0.996
CASP9	BIRC5	1851230	1848314	ENSP00000330237	ENSP00000301633	0	0	0	0	0	0.948	0.8	0.862	0.998
BRCA1	FANCD2	1861387	1847078	ENSP00000418960	ENSP00000287647	0	0	0	0	0	0.944	0.9	0.81	0.998
RHOA	MAPK8	1860210	1853988	ENSP00000400175	ENSP00000353483	0	0	0	0	0	0.944	0.8	0.768	0.997
RPA2	ORC1	1856012	1855507	ENSP00000363021	ENSP00000360621	0	0	0	0	0.144	0.943	0.9	0.169	0.995
RPA2	ORC2	1856012	1843392	ENSP00000363021	ENSP00000234296	0	0	0	0	0.157	0.943	0.9	0	0.994
RPA2	MCM5	1856012	1842548	ENSP00000363021	ENSP00000216122	0	0	0	0	0.736	0.943	0.9	0.422	0.999
RPA2	MCM2	1856012	1845676	ENSP00000363021	ENSP00000265056	0	0	0	0	0.701	0.943	0.9	0.318	0.998
RPA2	MCM4	1856012	1845065	ENSP00000363021	ENSP00000262105	0	0	0	0	0.688	0.943	0.9	0.294	0.998
PCNA	UBE2I	1856984	1850693	ENSP00000368438	ENSP00000324897	0	0	0	0	0.091	0.942	0	0.939	0.996
SUMO2	UBA2	1860567	1843822	ENSP00000405965	ENSP00000246548	0	0	0	0	0.112	0.941	0.9	0.889	0.999
NEDD8	SKP1	1844012	1843292	ENSP00000250495	ENSP00000231487	0	0	0	0	0.114	0.94	0.9	0.855	0.999
SUMO1	HSP90AA1	1857989	1851814	ENSP00000376076	ENSP00000335153	0	0	0	0	0.097	0.94	0	0.357	0.962
HDAC3	EP300	1848477	1845316	ENSP00000302967	ENSP00000263253	0	0	0	0	0	0.939	0.9	0.837	0.998
CASP8	BIRC2	1853692	1843127	ENSP00000351273	ENSP00000227758	0	0	0	0	0	0.938	0.9	0.73	0.998
BRCA1	SUMO2	1861387	1860567	ENSP00000418960	ENSP00000405965	0	0	0	0	0	0.938	0	0.342	0.957
ORC1	CDT1	1855507	1848231	ENSP00000360621	ENSP00000301019	0	0	0	0	0.568	0.937	0.9	0.361	0.998
SUMO1	JUN	1857989	1855436	ENSP00000376076	ENSP00000360266	0	0	0	0	0	0.932	0	0.488	0.964
EGFR	CALM2	1846445	1846243	ENSP00000275493	ENSP00000272298	0	0	0	0	0	0.931	0	0.276	0.948
PCNA	MCM7	1856984	1848945	ENSP00000368438	ENSP00000307288	0	0	0	0	0.915	0.929	0	0.812	0.998
PCNA	MCM4	1856984	1845065	ENSP00000368438	ENSP00000262105	0	0	0	0	0.949	0.929	0	0.732	0.998
UBE2I	RAD18	1850693	1845644	ENSP00000324897	ENSP00000264926	0	0	0	0	0	0.926	0	0.731	0.979
RPA1	DMC1	1844316	1842529	ENSP00000254719	ENSP00000216024	0.09	0	0	0	0.109	0.924	0.9	0.45	0.996
SRC	MET	1853652	1849944	ENSP00000350941	ENSP00000317272	0	0	0	0.714	0	0.923	0.9	0.763	0.993
RAD51	RAD18	1857551	1845644	ENSP00000372088	ENSP00000264926	0	0	0	0	0.07	0.923	0	0.827	0.986
RAC1	BIRC2	1853302	1843127	ENSP00000348461	ENSP00000227758	0	0	0	0	0	0.921	0	0.201	0.935
EP300	JUND	1845316	1844164	ENSP00000263253	ENSP00000252818	0	0	0	0	0	0.921	0.9	0.535	0.996
RANGAP1	NXF1	1853317	1847469	ENSP00000348577	ENSP00000294172	0	0	0	0	0	0.921	0	0.551	0.963
EPHB2	SRC	1856154	1853652	ENSP00000363763	ENSP00000350941	0	0	0	0.782	0.112	0.918	0.9	0.907	0.993
SHC1	LRP1	1860266	1843653	ENSP00000401303	ENSP00000243077	0	0	0	0	0	0.917	0	0.35	0.943
CEBPB	SRF	1848728	1845734	ENSP00000305422	ENSP00000265354	0	0	0	0	0	0.917	0	0.413	0.949



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SUMO1	RAD52	1857989	1853694	ENSP00000376076	ENSP00000351284	0	0	0	0	0	0.917	0	0.887	0.99
BRCA1	CDK4	1861387	1844551	ENSP00000418960	ENSP00000257904	0	0	0	0	0	0.916	0.9	0.518	0.995
PCNA	CDK4	1856984	1844551	ENSP00000368438	ENSP00000257904	0	0	0	0	0.168	0.916	0.9	0.891	0.999
SUMO1	MEF2A	1857989	1853046	ENSP00000376076	ENSP00000346389	0	0	0	0	0	0.915	0	0.301	0.938
PAK1	RAF1	1846573	1844086	ENSP00000278568	ENSP00000251849	0	0	0	0.643	0	0.915	0.9	0.758	0.993
SRC	LRP1	1853652	1843653	ENSP00000350941	ENSP00000243077	0	0	0	0	0	0.914	0	0.359	0.943
RFC3	MCM3	1857148	1843226	ENSP00000369411	ENSP00000229854	0.089	0	0	0	0.736	0.914	0	0.497	0.988
CTNNB1	RBBP5	1852818	1845562	ENSP00000344456	ENSP00000264515	0	0	0	0	0	0.914	0.9	0.071	0.991
SMAD4	SMAD7	1852473	1845078	ENSP00000341551	ENSP00000262158	0	0	0	0.653	0	0.914	0.9	0.978	0.994
BRCA1	BRCA2	1861387	1857163	ENSP00000418960	ENSP00000369497	0	0	0	0	0	0.913	0.9	0.943	0.999
BRCA1	RPA1	1861387	1844316	ENSP00000418960	ENSP00000254719	0	0	0	0	0	0.913	0.9	0.324	0.993
SMAD4	CEBPB	1852473	1848728	ENSP00000341551	ENSP00000305422	0	0	0	0	0	0.912	0.9	0.211	0.992
RBBP5	SMARC C1	1845562	1844297	ENSP00000264515	ENSP00000254480	0	0	0	0	0	0.909	0	0.101	0.914
RFC4	MCM3	1847705	1843226	ENSP00000296273	ENSP00000229854	0.089	0	0.205	0	0.533	0.904	0	0.557	0.983
CUL4A	SKP1	1856298	1843292	ENSP00000364589	ENSP00000231487	0	0	0	0	0	0.904	0	0.872	0.987
NEDD8	CDC34	1844012	1842491	ENSP00000250495	ENSP00000215574	0	0	0	0	0	0.903	0	0.724	0.972
SMAD4	UBE2I	1852473	1850693	ENSP00000341551	ENSP00000324897	0	0	0	0	0	0.903	0.9	0.424	0.994
HSP90A A1	SKP1	1851814	1843292	ENSP00000335153	ENSP00000231487	0	0	0	0	0.09	0.901	0	0.71	0.971
SUMO2	FOS	1860567	1848822	ENSP00000405965	ENSP00000306245	0	0	0	0	0	0.899	0	0.235	0.919
SRC	FYN	1853652	1853081	ENSP00000350941	ENSP00000346671	0	0	0.527	0.977	0	0.896	0.9	0.921	0.989
GRB10	EGFR	1858657	1846445	ENSP00000381793	ENSP00000275493	0	0	0	0	0	0.881	0	0.611	0.952
CUL4A	CDT1	1856298	1848231	ENSP00000364589	ENSP00000301019	0	0	0	0	0	0.878	0	0.678	0.959
PSMD4	RBBP5	1854905	1845562	ENSP00000357879	ENSP00000264515	0	0	0	0	0	0.878	0	0	0.878
SRC	RAF1	1853652	1844086	ENSP00000350941	ENSP00000251849	0	0	0	0.698	0	0.877	0	0.986	0.913
FYN	CTNNB 1	1853081	1852818	ENSP00000346671	ENSP00000344456	0	0	0	0	0	0.874	0.9	0.925	0.998
PCNA	CUL4A	1856984	1856298	ENSP00000368438	ENSP00000364589	0	0	0	0	0	0.874	0	0.506	0.935
SUMO1	CDK4	1857989	1844551	ENSP00000376076	ENSP00000257904	0	0	0	0	0.071	0.874	0	0.27	0.907
LCK	HSP90 AA1	1852042	1851814	ENSP00000337825	ENSP00000335153	0	0	0	0	0	0.873	0	0.887	0.985
DDB1	CDT1	1848334	1848231	ENSP00000301764	ENSP00000301019	0	0	0	0	0.07	0.87	0	0.904	0.987
PTPRJ	EGFR	1860195	1846445	ENSP00000400010	ENSP00000275493	0	0	0	0	0	0.87	0	0.723	0.963
CTNNB1	CUL1	1852818	1850867	ENSP00000344456	ENSP00000326804	0	0	0	0	0.073	0.869	0.9	0.477	0.992
DDB1	NEDD8	1848334	1844012	ENSP00000301764	ENSP00000250495	0	0	0	0	0	0.867	0	0.3	0.903
EP300	APEX1	1845316	1842615	ENSP00000263253	ENSP00000216714	0	0	0	0	0	0.866	0	0.33	0.906
PTPRJ	MET	1860195	1849944	ENSP00000400010	ENSP00000317272	0	0	0	0	0	0.865	0.9	0.401	0.991
BRCA2	DMC1	1857163	1842529	ENSP00000369497	ENSP00000216024	0	0	0	0	0	0.863	0.9	0.388	0.99
CTNNB1	RBX1	1852818	1842568	ENSP00000344456	ENSP00000216225	0	0	0	0	0	0.863	0	0.245	0.892
GRB2	LRP1	1852164	1843653	ENSP00000339007	ENSP00000243077	0	0	0	0	0	0.862	0	0.159	0.879
MAPK8	SMAD3	1853988	1851536	ENSP00000353483	ENSP00000332973	0	0	0	0	0	0.86	0	0.905	0.986
CALM1	EGFR	1853445	1846445	ENSP00000349467	ENSP00000275493	0	0	0	0	0	0.858	0	0.198	0.881

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EGFR	LGALS3	1846445	1844285	ENSP00000275493	ENSP00000254301	0	0	0	0	0	0.857	0	0.416	0.913
SMAD3	CDK4	1851536	1844551	ENSP00000332973	ENSP00000257904	0	0	0	0	0	0.857	0.9	0.895	0.998
RAC1	SH3RF1	1853302	1846918	ENSP00000348461	ENSP00000284637	0	0	0	0	0	0.847	0	0.486	0.918
SMAD3	SMAD7	1851536	1845078	ENSP00000332973	ENSP00000262158	0	0	0	0.695	0	0.845	0.9	0.988	0.988
SHC1	MET	1860266	1849944	ENSP00000401303	ENSP00000317272	0	0	0	0	0	0.844	0.8	0.552	0.984
CDKN2A	MCM3	1859838	1843226	ENSP00000394932	ENSP00000229854	0	0	0	0	0	0.843	0	0.261	0.879
HDAC3	SMAD7	1848477	1845078	ENSP00000302967	ENSP00000262158	0	0	0	0	0	0.843	0	0.448	0.909
CDC20	CDC6	1849070	1842453	ENSP00000308450	ENSP00000209728	0	0	0	0	0.18	0.838	0	0.734	0.961
CTNNB1	MET	1852818	1849944	ENSP00000344456	ENSP00000317272	0	0	0	0	0	0.833	0.9	0.886	0.997
RAD52	DMC1	1853694	1842529	ENSP00000351284	ENSP00000216024	0	0	0	0	0	0.832	0	0.882	0.979
SKP1	CDC34	1843292	1842491	ENSP00000231487	ENSP00000215574	0	0	0	0	0.082	0.831	0.9	0.893	0.998
CALM1	NOS2	1853445	1850906	ENSP00000349467	ENSP00000327251	0	0	0	0	0	0.831	0.8	0.208	0.97
FEN1	DMC1	1848737	1842529	ENSP00000305480	ENSP00000216024	0.071	0	0	0	0.112	0.83	0	0.389	0.902
CKS1B	CDC6	1849378	1842453	ENSP00000311083	ENSP00000209728	0	0	0	0	0.115	0.83	0	0.377	0.898
RAD51	FEN1	1857551	1848737	ENSP00000372088	ENSP00000305480	0.071	0	0	0	0.112	0.83	0	0.704	0.953
SRC	CTNNB1	1853652	1852818	ENSP00000350941	ENSP00000344456	0	0	0	0	0	0.829	0.9	0.817	0.996
RAD18	DMC1	1845644	1842529	ENSP00000264926	ENSP00000216024	0	0	0	0	0	0.826	0	0.553	0.918
ATRIP	RPA1	1850516	1844316	ENSP00000323099	ENSP00000254719	0	0	0	0	0	0.823	0.9	0.912	0.998
CNOT4	PSMD14	1862294	1859182	ENSP00000445508	ENSP00000386541	0	0	0	0	0	0.823	0	0.235	0.858
JUN	UBE2I	1855436	1850693	ENSP00000360266	ENSP00000324897	0	0	0	0	0	0.823	0	0.883	0.978
POLR2A	MCM3	1849743	1843226	ENSP00000314949	ENSP00000229854	0	0	0	0	0.073	0.821	0	0.102	0.839
POLR2A	MCM7	1849743	1848945	ENSP00000314949	ENSP00000307288	0	0	0	0	0	0.821	0	0.341	0.878
CALM1	KRAS	1853445	1844404	ENSP00000349467	ENSP00000256078	0	0	0	0	0	0.821	0	0.154	0.843
SRC	HSP90AA1	1853652	1851814	ENSP00000350941	ENSP00000335153	0	0	0	0	0	0.819	0.9	0.946	0.998
UBE2I	DMC1	1850693	1842529	ENSP00000324897	ENSP00000216024	0	0	0	0	0.084	0.818	0	0.797	0.963
SHC1	FYN	1860266	1853081	ENSP00000401303	ENSP00000346671	0	0	0	0	0	0.817	0.9	0.967	0.999
BRCA1	ATRIP	1861387	1850516	ENSP00000418960	ENSP00000323099	0	0	0	0	0	0.812	0	0.648	0.931
SUMO1	BUB1B	1857989	1847075	ENSP00000376076	ENSP00000287598	0	0	0	0	0	0.812	0	0.16	0.835
MYLK	CALM1	1853981	1853445	ENSP00000353452	ENSP00000349467	0	0	0	0	0	0.812	0.8	0.301	0.971
BRCA1	CREB1	1861387	1859295	ENSP00000418960	ENSP00000387699	0	0	0	0	0	0.812	0	0.35	0.872
EEA1	EGFR	1849997	1846445	ENSP00000317955	ENSP00000275493	0	0	0	0	0	0.812	0	0.47	0.896
CEBPB	EP300	1848728	1845316	ENSP00000305422	ENSP00000263253	0	0	0	0	0	0.812	0.9	0.532	0.99
DDB1	EP300	1848334	1845316	ENSP00000301764	ENSP00000263253	0	0	0	0	0	0.812	0	0.251	0.853
FEN1	EP300	1848737	1845316	ENSP00000305480	ENSP00000263253	0	0	0	0	0	0.812	0	0.271	0.857
SMAD3	FOS	1851536	1848822	ENSP00000332973	ENSP00000306245	0	0	0	0	0	0.812	0.9	0.962	0.999
NTRK1	GRB2	1861874	1852164	ENSP00000431418	ENSP00000339007	0	0	0	0	0	0.812	0.9	0.583	0.991
MAPK9	GRB2	1859420	1852164	ENSP00000389338	ENSP00000339007	0	0	0	0	0	0.812	0	0.588	0.919
SRC	HDAC3	1853652	1848477	ENSP00000350941	ENSP00000302967	0	0	0	0	0	0.812	0	0.392	0.881
SUMO1	MDM4	1857989	1854537	ENSP00000376076	ENSP00000356150	0	0	0	0	0	0.812	0	0.243	0.852

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RAC1	NOS2	1853302	1850906	ENSP00000348461	ENSP00000327251	0	0	0	0	0	0.812	0	0.809	0.962
FANCD2	RAD18	1847078	1845644	ENSP00000287647	ENSP00000264926	0	0	0	0	0.108	0.812	0	0.922	0.985
GRB10	RAF1	1858657	1844086	ENSP00000381793	ENSP00000251849	0	0	0	0	0	0.812	0	0.854	0.971
SMAD4	SKP2	1852473	1846369	ENSP00000341551	ENSP00000274255	0	0	0	0	0	0.812	0	0.408	0.884
SUMO1	ARHGD IA	1857989	1846084	ENSP00000376076	ENSP00000269321	0	0	0	0	0	0.812	0	0.11	0.826
CASP8	CASP9	1853692	1851230	ENSP00000351273	ENSP00000330237	0	0	0	0.735	0	0.811	0	0.885	0.855
SKP2	EP300	1846369	1845316	ENSP00000274255	ENSP00000263253	0	0	0	0	0	0.811	0.9	0.361	0.986
MAPK8	CBL	1853988	1845465	ENSP00000353483	ENSP00000264033	0	0	0	0	0	0.81	0	0.384	0.878
RUVBL2	PCNA	1864926	1856984	ENSP00000473172	ENSP00000368438	0	0	0	0	0.143	0.81	0	0.181	0.854
BRCA1	POU2F 1	1861387	1854675	ENSP00000418960	ENSP00000356840	0	0	0	0	0	0.809	0.9	0.126	0.981
AXIN1	SMAD7	1845118	1845078	ENSP00000262320	ENSP00000262158	0	0	0	0	0	0.809	0.9	0.86	0.997
BRCA1	SUMO1	1861387	1857989	ENSP00000418960	ENSP00000376076	0	0	0	0	0	0.809	0	0.416	0.883
BRCA1	UBE2I	1861387	1850693	ENSP00000418960	ENSP00000324897	0	0	0	0	0	0.809	0	0.392	0.879
CTNNB1	ASH2L	1852818	1852381	ENSP00000344456	ENSP00000340896	0	0	0	0	0	0.809	0.9	0.101	0.981
AURKB	BARD1	1863844	1844829	ENSP00000463999	ENSP00000260947	0	0	0	0	0.063	0.808	0	0.36	0.875
BIRC5	BIRC2	1848314	1843127	ENSP00000301633	ENSP00000227758	0	0	0	0	0	0.808	0.8	0.974	0.998
BIRC5	BIRC3	1848314	1845359	ENSP00000301633	ENSP00000263464	0	0	0	0	0	0.808	0	0.948	0.989
CDC42	CBL	1849707	1845465	ENSP00000314458	ENSP00000264033	0	0	0	0	0	0.808	0.9	0.528	0.99
RAD51	DMC1	1857551	1842529	ENSP00000372088	ENSP00000216024	0	0	0.526	0.932	0	0.808	0.9	0.507	0.981
BRCA1	SMARC A2	1861387	1845805	ENSP00000418960	ENSP00000265773	0	0	0	0	0	0.808	0	0.472	0.894
CUL1	CDT1	1850867	1848231	ENSP00000326804	ENSP00000301019	0	0	0	0	0	0.807	0	0.484	0.896
CD2	LCK	1855033	1852042	ENSP00000358490	ENSP00000337825	0	0	0	0	0	0.807	0	0.896	0.979
SKP2	RBL2	1846369	1845071	ENSP00000274255	ENSP00000262133	0	0	0	0	0.073	0.807	0.9	0.34	0.986
BRCA1	SMAD3	1861387	1851536	ENSP00000418960	ENSP00000332973	0	0	0	0	0	0.807	0	0.35	0.869
CALM1	HSP90 AA1	1853445	1851814	ENSP00000349467	ENSP00000335153	0	0	0	0	0	0.807	0	0.49	0.897
AURKB	SUMO1	1863844	1857989	ENSP00000463999	ENSP00000376076	0	0	0	0	0	0.806	0	0.221	0.843
AURKB	SUMO2	1863844	1860567	ENSP00000463999	ENSP00000405965	0	0	0	0	0	0.806	0	0.255	0.85
BRCA2	FANCD 2	1857163	1847078	ENSP00000369497	ENSP00000287647	0	0	0	0	0.115	0.805	0.9	0.974	0.999
CDC20	SKP2	1849070	1846369	ENSP00000308450	ENSP00000274255	0	0	0	0	0.113	0.805	0	0.566	0.918
FOS	EP300	1848822	1845316	ENSP00000306245	ENSP00000263253	0	0	0	0	0	0.804	0.9	0.812	0.996
SUMO2	EP300	1860567	1845316	ENSP00000405965	ENSP00000263253	0	0	0	0	0	0.804	0	0.542	0.906
CTNNB1	SMAD7	1852818	1845078	ENSP00000344456	ENSP00000262158	0	0	0	0	0	0.804	0.9	0.926	0.998
SMAD3	CEBPB	1851536	1848728	ENSP00000332973	ENSP00000305422	0	0	0	0	0	0.803	0.9	0.303	0.985
CEBPB	SMARC C1	1848728	1844297	ENSP00000305422	ENSP00000254480	0	0	0	0	0	0.803	0	0.08	0.811
CEBPB	SMARC B1	1848728	1845291	ENSP00000305422	ENSP00000263121	0	0	0	0	0	0.803	0	0.163	0.828
SUMO1	AXIN1	1857989	1845118	ENSP00000376076	ENSP00000262320	0	0	0	0	0	0.803	0	0.304	0.857
CDT1	ORC2	1848231	1843392	ENSP00000301019	ENSP00000234296	0	0	0	0	0.163	0.802	0.9	0.132	0.983
SMAD3	CUL1	1851536	1850867	ENSP00000332973	ENSP00000326804	0	0	0	0	0.071	0.802	0	0.191	0.838

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FBXL3	CUL1	1853221	1850867	ENSP00000347834	ENSP00000326804	0	0	0	0	0	0.791	0.9	0.341	0.985
BACH1	BARD1	1847037	1844829	ENSP00000286800	ENSP00000260947	0	0	0	0	0	0.789	0	0	0.789
SUMO2	JUN	1860567	1855436	ENSP00000405965	ENSP00000360266	0	0	0	0	0	0.785	0	0.354	0.856
CUL1	DDB1	1850867	1848334	ENSP00000326804	ENSP00000301764	0	0	0	0	0.073	0.783	0	0.559	0.904
POLR2A	EP300	1849743	1845316	ENSP00000314949	ENSP00000263253	0	0	0	0	0	0.777	0.9	0.276	0.982
RBL2	CDK4	1845071	1844551	ENSP00000262133	ENSP00000257904	0	0	0	0	0	0.77	0.9	0.868	0.996
CDKN2A	ORC2	1859838	1843392	ENSP00000394932	ENSP00000234296	0	0	0	0	0	0.761	0	0	0.761
SMAD3	SMAD1	1851536	1848770	ENSP00000332973	ENSP00000305769	0	0	0	0.968	0	0.756	0	0.784	0.762
ORC1	EEA1	1855507	1849997	ENSP00000360621	ENSP00000317955	0	0	0	0	0	0.754	0	0	0.754
SUMO2	SMARC C1	1860567	1844297	ENSP00000405965	ENSP00000254480	0	0	0	0	0	0.752	0	0.047	0.754
FOS	EGFR	1848822	1846445	ENSP00000306245	ENSP00000275493	0	0	0	0	0	0.751	0	0.777	0.942
JUN	HDAC3	1855436	1848477	ENSP00000360266	ENSP00000302967	0	0	0	0	0	0.75	0	0.564	0.886
PAK2	PAK1	1849679	1846573	ENSP00000314067	ENSP00000278568	0	0	0.527	0.979	0	0.75	0.9	0.917	0.974
EGFR	GAPDH	1846445	1843185	ENSP00000275493	ENSP00000229239	0	0	0	0	0	0.748	0	0.733	0.93
FYN	GRB2	1853081	1852164	ENSP00000346671	ENSP00000339007	0	0	0	0.764	0.114	0.748	0.9	0.979	0.981
MAPK8	CDC42	1853988	1849707	ENSP00000353483	ENSP00000314458	0	0	0	0	0	0.746	0.9	0.808	0.994
MAPK9	CDC42	1859420	1849707	ENSP00000389338	ENSP00000314458	0	0	0	0	0	0.746	0.9	0.727	0.992
CUL4A	CRBN	1856298	1843306	ENSP00000364589	ENSP00000231948	0	0	0	0	0	0.745	0.9	0.681	0.991
PAK1	EGFR	1846573	1846445	ENSP00000278568	ENSP00000275493	0	0	0	0.632	0	0.745	0	0.32	0.773
SUMO2	RAD18	1860567	1845644	ENSP00000405965	ENSP00000264926	0	0	0	0	0	0.738	0	0.364	0.827
SRC	PAK2	1853652	1849679	ENSP00000350941	ENSP00000314067	0	0	0.387	0.629	0	0.735	0.9	0.473	0.98
EEA1	ORC2	1849997	1843392	ENSP00000317955	ENSP00000234296	0	0	0	0	0	0.731	0	0.052	0.734
FYN	RAF1	1853081	1844086	ENSP00000346671	ENSP00000251849	0	0	0	0.7	0	0.722	0	0.964	0.802
JUN	FBXW7	1855436	1846740	ENSP00000360266	ENSP00000281708	0	0	0	0	0	0.717	0	0.544	0.865
FYN	HRAS	1853081	1849235	ENSP00000346671	ENSP00000309845	0	0	0	0	0.113	0.717	0.9	0.514	0.986
SRC	HRAS	1853652	1849235	ENSP00000350941	ENSP00000309845	0	0	0	0	0.113	0.717	0.9	0.95	0.998
SUMO2	HSP90 AA1	1860567	1851814	ENSP00000405965	ENSP00000335153	0	0	0	0	0.097	0.716	0	0.243	0.789
SUMO2	PCNA	1860567	1856984	ENSP00000405965	ENSP00000368438	0	0	0	0	0.178	0.712	0	0.564	0.888
SUMO1	CDC6	1857989	1842453	ENSP00000376076	ENSP00000209728	0	0	0	0	0	0.711	0	0.159	0.747
SUMO2	RAD51	1860567	1857551	ENSP00000405965	ENSP00000372088	0	0	0	0	0	0.709	0	0.32	0.793
RHOA	PAK1	1860210	1846573	ENSP00000400175	ENSP00000278568	0	0	0	0	0	0.705	0.9	0.688	0.99
CDKN2A	CDC6	1859838	1842453	ENSP00000394932	ENSP00000209728	0	0	0	0	0	0.697	0	0.537	0.854
SUMO2	CENPC 1	1860567	1846338	ENSP00000405965	ENSP00000273853	0	0	0	0	0	0.695	0	0.458	0.828
CDKN2A	MCM5	1859838	1842548	ENSP00000394932	ENSP00000216122	0	0	0	0	0	0.693	0	0.36	0.795
CDKN2A	MCM2	1859838	1845676	ENSP00000394932	ENSP00000265056	0	0	0	0	0	0.693	0	0.34	0.789
SUMO2	MCM3	1860567	1843226	ENSP00000405965	ENSP00000229854	0	0	0	0	0.063	0.69	0	0.132	0.726
SUMO2	MEF2A	1860567	1853046	ENSP00000405965	ENSP00000346389	0	0	0	0	0	0.69	0	0.841	0.948
SUMO2	MCM4	1860567	1845065	ENSP00000405965	ENSP00000262105	0	0	0	0	0.098	0.69	0	0	0.709
RPA1	MCM3	1844316	1843226	ENSP00000254719	ENSP00000229854	0	0	0	0	0.19	0.687	0.9	0.28	0.979
PTPRJ	CTNNB 1	1860195	1852818	ENSP00000400010	ENSP00000344456	0	0	0	0	0	0.686	0.9	0.404	0.979

WDR5	HDAC3	1853715	1848477	ENSP00000351446	ENSP00000302967	0	0	0	0	0.141	0.684	0	0.474	0.845
EEA1	CDT1	1849997	1848231	ENSP00000317955	ENSP00000301019	0	0	0	0	0	0.682	0	0	0.682
EEA1	MCM2	1849997	1845676	ENSP00000317955	ENSP00000265056	0	0	0	0	0	0.682	0	0	0.682
EEA1	MCM3	1849997	1843226	ENSP00000317955	ENSP00000229854	0	0	0	0	0	0.679	0	0	0.679
AURKB	BUB1B	1863844	1847075	ENSP00000463999	ENSP00000287598	0	0	0	0	0.288	0.672	0.9	0.962	0.999
WDHD1	MCM3	1854036	1843226	ENSP00000353793	ENSP00000229854	0	0	0	0	0.683	0.671	0	0.255	0.915
SUMO2	NEDD8	1860567	1844012	ENSP00000405965	ENSP00000250495	0	0	0	0	0.479	0.669	0	0.782	0.959
RHOA	CASP8	1860210	1853692	ENSP00000400175	ENSP00000351273	0	0	0	0	0	0.667	0	0.238	0.735
MAPK8	CASP8	1853988	1853692	ENSP00000353483	ENSP00000351273	0	0	0	0	0	0.667	0	0.446	0.807
MAPK8	CTNNB1	1853988	1852818	ENSP00000353483	ENSP00000344456	0	0	0	0	0	0.667	0	0.901	0.965
MAPK9	CTNNB1	1859420	1852818	ENSP00000389338	ENSP00000344456	0	0	0	0	0	0.667	0.9	0.399	0.978
CASP8	ARHGDIA	1853692	1846084	ENSP00000351273	ENSP00000269321	0	0	0	0	0	0.667	0	0.045	0.668
CDC20	MAD1L1	1849070	1845817	ENSP00000308450	ENSP00000265854	0	0	0	0	0	0.665	0.9	0.799	0.992
CHEK2	RAD52	1857546	1853694	ENSP00000372023	ENSP00000351284	0	0	0	0	0	0.665	0	0.75	0.912
FYN	HSP90AA1	1853081	1851814	ENSP00000346671	ENSP00000335153	0	0	0	0	0	0.665	0.9	0.388	0.977
CUL4A	CTNNB1	1856298	1852818	ENSP00000364589	ENSP00000344456	0	0	0	0	0	0.664	0	0.233	0.732
PCNA	DMC1	1856984	1842529	ENSP00000368438	ENSP00000216024	0	0	0	0	0.112	0.664	0	0.445	0.82
RAD51	PCNA	1857551	1856984	ENSP00000372088	ENSP00000368438	0	0	0	0	0.112	0.664	0.9	0.73	0.99
SMARC B1	JUND	1845291	1844164	ENSP00000263121	ENSP00000252818	0	0	0	0	0	0.663	0	0.217	0.724
JUN	SMARC B1	1855436	1845291	ENSP00000360266	ENSP00000263121	0	0	0	0	0	0.663	0.9	0.316	0.974
SOS1	FYN	1858968	1853081	ENSP00000384675	ENSP00000346671	0	0	0	0	0	0.658	0.9	0.464	0.98
MAPK9	FOS	1859420	1848822	ENSP00000389338	ENSP00000306245	0	0	0	0	0	0.651	0.9	0.923	0.997
MAPK8	FOS	1853988	1848822	ENSP00000353483	ENSP00000306245	0	0	0	0	0	0.651	0.9	0.989	0.999
SMAD4	LEF1	1852473	1845704	ENSP00000341551	ENSP00000265165	0	0	0	0	0	0.651	0.8	0.945	0.995
NTRK1	HSP90AA1	1861874	1851814	ENSP00000431418	ENSP00000335153	0	0	0	0	0	0.651	0	0.834	0.939
DDB1	NXF1	1848334	1847469	ENSP00000301764	ENSP00000294172	0	0	0	0	0	0.644	0	0	0.644
VPS36	NXT1	1856803	1844345	ENSP00000367299	ENSP00000254998	0	0	0	0	0	0.644	0	0	0.644
LEF1	EP300	1845704	1845316	ENSP00000265165	ENSP00000263253	0	0	0	0	0	0.643	0.9	0.834	0.993
RAD51	RPA2	1857551	1856012	ENSP00000372088	ENSP00000363021	0	0	0	0	0.114	0.643	0.9	0.684	0.988
LCK	RAF1	1852042	1844086	ENSP00000337825	ENSP00000251849	0	0	0	0.694	0	0.639	0	0.942	0.743
SMARC A2	EP300	1845805	1845316	ENSP00000265773	ENSP00000263253	0	0	0	0	0	0.638	0	0.599	0.849
SRC	SMARC C1	1853652	1844297	ENSP00000350941	ENSP00000254480	0	0	0	0	0	0.632	0	0.137	0.668
CUL4A	HSP90AA1	1856298	1851814	ENSP00000364589	ENSP00000335153	0	0	0	0	0	0.63	0	0.244	0.708
RAC1	SOD1	1853302	1846132	ENSP00000348461	ENSP00000270142	0	0	0	0	0	0.629	0	0.273	0.719
GRB2	HGF	1852164	1842916	ENSP00000339007	ENSP00000222390	0	0	0	0	0	0.626	0.9	0.892	0.995

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EPHB2	GRB2	1856154	1852164	ENSP00000363763	ENSP00000339007	0	0	0	0	0	0.623	0	0.331	0.737
PCNA	BARD1	1856984	1844829	ENSP00000368438	ENSP00000260947	0	0	0	0	0.065	0.618	0.9	0.438	0.977
HSP90A A1	NOS2	1851814	1850906	ENSP00000335153	ENSP00000327251	0	0	0	0	0	0.618	0	0.262	0.706
EGFR	RAF1	1846445	1844086	ENSP00000275493	ENSP00000251849	0	0	0	0.63	0	0.618	0	0.875	0.74
SHC1	S100A8	1860266	1854859	ENSP00000401303	ENSP00000357721	0	0	0	0	0	0.616	0	0	0.616
MCM7	CDT1	1848945	1848231	ENSP00000307288	ENSP00000301019	0	0	0	0	0.736	0.613	0.9	0.667	0.996
SUMO1	MCM7	1857989	1848945	ENSP00000376076	ENSP00000307288	0	0	0	0	0.078	0.613	0	0.092	0.647
CDT1	MCM4	1848231	1845065	ENSP00000301019	ENSP00000262105	0	0	0	0	0.479	0.613	0.9	0.726	0.993
SUMO2	PSMD4	1860567	1854905	ENSP00000405965	ENSP00000357879	0	0	0	0	0.079	0.613	0	0.256	0.712
CREB1	JUN	1859295	1855436	ENSP00000387699	ENSP00000360266	0	0	0	0	0	0.612	0.9	0.978	0.999
BMP7	SMAD3	1858342	1851536	ENSP00000379204	ENSP00000332973	0	0	0	0	0	0.61	0	0.799	0.918
CUL1	CKS1B	1850867	1849378	ENSP00000326804	ENSP00000311083	0	0	0	0	0	0.609	0.9	0.517	0.979
SUMO2	JUND	1860567	1844164	ENSP00000405965	ENSP00000252818	0	0	0	0	0	0.608	0	0.081	0.625
CDC42	BIRC2	1849707	1843127	ENSP00000314458	ENSP00000227758	0	0	0	0	0	0.607	0	0.125	0.641
MBP	PAK1	1857547	1846573	ENSP00000372025	ENSP00000278568	0	0	0	0	0	0.607	0	0.42	0.762
ING4	CDC34	1858422	1842491	ENSP00000380024	ENSP00000215574	0	0	0	0	0	0.605	0	0	0.605
EP300	GAPDH	1845316	1843185	ENSP00000263253	ENSP00000229239	0	0	0	0	0	0.605	0	0.669	0.863
AURKB	MAD2L 1	1863844	1847745	ENSP00000463999	ENSP00000296509	0	0	0	0	0.544	0.604	0.9	0.549	0.99
SOS1	LCK	1858968	1852042	ENSP00000384675	ENSP00000337825	0	0	0	0	0	0.602	0.9	0.425	0.975
SOS1	MET	1858968	1849944	ENSP00000384675	ENSP00000317272	0	0	0	0	0	0.602	0.9	0.368	0.972
BMP7	SMAD1	1858342	1848770	ENSP00000379204	ENSP00000305769	0	0	0	0	0	0.601	0.9	0.776	0.99
SMAD3	SMARC C1	1851536	1844297	ENSP00000332973	ENSP00000254480	0	0	0	0	0	0.6	0	0.087	0.619
SUMO2	POLR2 A	1860567	1849743	ENSP00000405965	ENSP00000314949	0	0	0	0	0	0.6	0	0.053	0.605
LCK	CDC42	1852042	1849707	ENSP00000337825	ENSP00000314458	0	0	0	0	0.071	0.599	0.9	0.565	0.981
ORC1	FBXW7	1855507	1846740	ENSP00000360621	ENSP00000281708	0	0	0	0	0	0.598	0	0.176	0.654
RUVBL2	SUMO2	1864926	1860567	ENSP00000473172	ENSP00000405965	0	0	0	0	0	0.596	0	0.129	0.633
CDT1	CDK4	1848231	1844551	ENSP00000301019	ENSP00000257904	0	0	0	0	0.08	0.596	0	0.6	0.838
ING4	EP300	1858422	1845316	ENSP00000380024	ENSP00000263253	0	0	0	0	0	0.595	0	0.379	0.738
CDKN2A	ING4	1859838	1858422	ENSP00000394932	ENSP00000380024	0	0	0	0	0	0.595	0	0.062	0.604
EPHB2	FOS	1856154	1848822	ENSP00000363763	ENSP00000306245	0	0	0	0	0	0.594	0	0.25	0.683
SHC1	LCK	1860266	1852042	ENSP00000401303	ENSP00000337825	0	0	0	0	0	0.594	0.9	0.937	0.997
SHC1	SRC	1860266	1853652	ENSP00000401303	ENSP00000350941	0	0	0	0.616	0	0.594	0.9	0.982	0.973
GRB2	HRAS	1852164	1849235	ENSP00000339007	ENSP00000309845	0	0	0	0	0.115	0.594	0.9	0.786	0.991
CDKN2A	UBE2I	1859838	1850693	ENSP00000394932	ENSP00000324897	0	0	0	0	0	0.592	0	0.243	0.678
SRC	EP300	1853652	1845316	ENSP00000350941	ENSP00000263253	0	0	0	0	0	0.591	0	0.612	0.834
HSP90A A1	MET	1851814	1849944	ENSP00000335153	ENSP00000317272	0	0	0	0	0	0.591	0	0.464	0.772
RHOA	BIRC2	1860210	1843127	ENSP00000400175	ENSP00000227758	0	0	0	0	0	0.59	0	0.194	0.656
RAC1	CDC42	1853302	1849707	ENSP00000348461	ENSP00000314458	0	0	0	0.976	0.071	0.59	0.9	0.996	0.959
HRAS	EGFR	1849235	1846445	ENSP00000309845	ENSP00000275493	0	0	0	0	0	0.59	0.9	0.988	0.999

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EGFR	KRAS	1846445	1844404	ENSP00000275493	ENSP00000256078	0	0	0	0	0	0.59	0.9	0.988	0.999
MEF2A	HDAC3	1853046	1848477	ENSP00000346389	ENSP00000302967	0	0	0	0	0	0.588	0	0.584	0.821
SRC	SRF	1853652	1845734	ENSP00000350941	ENSP00000265354	0	0	0	0	0	0.586	0	0.562	0.811
HDAC3	SRF	1848477	1845734	ENSP00000302967	ENSP00000265354	0	0	0	0	0	0.585	0	0.496	0.782
SMARC A2	DMC1	1845805	1842529	ENSP00000265773	ENSP00000216024	0	0	0	0	0	0.584	0	0.201	0.653
RAD51	SMARC A2	1857551	1845805	ENSP00000372088	ENSP00000265773	0	0	0	0	0	0.584	0	0.598	0.825
SUMO2	PSMD7	1860567	1842741	ENSP00000405965	ENSP00000219313	0	0	0	0	0.133	0.58	0	0	0.62
SUMO2	RAD52	1860567	1853694	ENSP00000405965	ENSP00000351284	0	0	0	0	0	0.579	0	0.644	0.843
SUMO2	MCM7	1860567	1848945	ENSP00000405965	ENSP00000307288	0	0	0	0	0.078	0.578	0	0.092	0.616
SUMO2	FEN1	1860567	1848737	ENSP00000405965	ENSP00000305480	0	0	0	0	0	0.578	0	0.064	0.588
COL4A1	APCS	1856385	1844350	ENSP00000364979	ENSP00000255040	0	0	0	0	0	0.576	0	0	0.576
MDM4	ARF1	1854537	1846224	ENSP00000356150	ENSP00000272102	0	0	0	0	0	0.576	0	0.052	0.58
HSP90A A1	BIRC5	1851814	1848314	ENSP00000335153	ENSP00000301633	0	0	0	0	0	0.576	0	0.909	0.959
BRCA2	BUB1B	1857163	1847075	ENSP00000369497	ENSP00000287598	0	0	0	0	0.106	0.576	0	0.872	0.947
BRCA1	CASP9	1861387	1851230	ENSP00000418960	ENSP00000330237	0	0	0	0	0	0.576	0	0.103	0.603
JUN	CASP9	1855436	1851230	ENSP00000360266	ENSP00000330237	0	0	0	0	0	0.576	0	0.531	0.792
CTNNB1	CBL	1852818	1845465	ENSP00000344456	ENSP00000264033	0	0	0	0	0	0.576	0	0.21	0.65
NTRK1	CBL	1861874	1845465	ENSP00000431418	ENSP00000264033	0	0	0	0	0	0.576	0.8	0.36	0.94
SMAD3	CBL	1851536	1845465	ENSP00000332973	ENSP00000264033	0	0	0	0	0	0.576	0	0.139	0.619
HRAS	CBL	1849235	1845465	ENSP00000309845	ENSP00000264033	0	0	0	0	0	0.576	0	0.49	0.774
BRCA1	CDKN2 A	1861387	1859838	ENSP00000418960	ENSP00000394932	0	0	0	0	0	0.576	0	0.72	0.876
MAPK8	CDT1	1853988	1848231	ENSP00000353483	ENSP00000301019	0	0	0	0	0	0.576	0	0.8	0.911
CASP8	CEBPB	1853692	1848728	ENSP00000351273	ENSP00000305422	0	0	0	0	0	0.576	0	0.103	0.603
CREB1	CEBPB	1859295	1848728	ENSP00000387699	ENSP00000305422	0	0	0	0	0	0.576	0	0.927	0.968
SUMO1	CEBPB	1857989	1848728	ENSP00000376076	ENSP00000305422	0	0	0	0	0	0.576	0	0.126	0.613
BRCA1	CTNNB 1	1861387	1852818	ENSP00000418960	ENSP00000344456	0	0	0	0	0	0.576	0	0.501	0.779
CASP8	CTNNB 1	1853692	1852818	ENSP00000351273	ENSP00000344456	0	0	0	0	0	0.576	0	0.287	0.684
GRB2	EGF	1852164	1845705	ENSP00000339007	ENSP00000265171	0	0	0	0	0	0.576	0.9	0	0.955
CEBPB	EGFR	1848728	1846445	ENSP00000305422	ENSP00000275493	0	0	0	0	0	0.576	0	0.4	0.734
PCNA	EGFR	1856984	1846445	ENSP00000368438	ENSP00000275493	0	0	0	0	0	0.576	0	0.719	0.876
ATG7	EP300	1853051	1845316	ENSP00000346437	ENSP00000263253	0	0	0	0	0	0.576	0	0.105	0.604
CDT1	EP300	1848231	1845316	ENSP00000301019	ENSP00000263253	0	0	0	0	0	0.576	0	0.151	0.624
MTA1	EP300	1851603	1845316	ENSP00000333633	ENSP00000263253	0	0	0	0	0	0.576	0	0.355	0.714
HSP90A A1	EP300	1851814	1845316	ENSP00000335153	ENSP00000263253	0	0	0	0	0	0.576	0	0.526	0.79
UBE2I	EP300	1850693	1845316	ENSP00000324897	ENSP00000263253	0	0	0	0	0	0.576	0	0.918	0.964
PCNA	FANCD 2	1856984	1847078	ENSP00000368438	ENSP00000287647	0	0	0	0	0.115	0.576	0	0.733	0.891
RAD51	FANCD 2	1857551	1847078	ENSP00000372088	ENSP00000287647	0	0	0	0	0.136	0.576	0	0.659	0.864

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AURKB	FBXW7	1863844	1846740	ENSP00000463999	ENSP00000281708	0	0	0	0	0	0.576	0	0.851	0.934
NQO1	FOS	1850182	1848822	ENSP00000319788	ENSP00000306245	0	0	0	0	0	0.576	0	0.215	0.652
CASP8	FYN	1853692	1853081	ENSP00000351273	ENSP00000346671	0	0	0	0	0	0.576	0	0.671	0.855
GRB10	FYN	1858657	1853081	ENSP00000381793	ENSP00000346671	0	0	0	0	0	0.576	0	0.374	0.723
MCL1	GAPDH	1854935	1843185	ENSP00000358022	ENSP00000229239	0	0	0	0	0	0.576	0	0.589	0.818
CDKN2A	GGA1	1859838	1852447	ENSP00000394932	ENSP00000341344	0	0	0	0	0	0.576	0	0.26	0.672
SDC1	HGF	1844292	1842916	ENSP00000254351	ENSP00000222390	0	0	0	0	0	0.576	0.9	0.845	0.992
HRAS	HGF	1849235	1842916	ENSP00000309845	ENSP00000222390	0	0	0	0	0	0.576	0.9	0.362	0.97
BRCA1	JUN	1861387	1855436	ENSP00000418960	ENSP00000360266	0	0	0	0	0	0.576	0	0.531	0.792
BRCA1	JUND	1861387	1844164	ENSP00000418960	ENSP00000252818	0	0	0	0	0	0.576	0	0.206	0.648
CSF2	KITLG	1847803	1843134	ENSP00000296871	ENSP00000228280	0	0	0	0	0	0.576	0	0.724	0.877
SMAD1	LEF1	1848770	1845704	ENSP00000305769	ENSP00000265165	0	0	0	0	0	0.576	0	0.493	0.777
SMAD3	LEF1	1851536	1845704	ENSP00000332973	ENSP00000265165	0	0	0	0	0	0.576	0	0.796	0.91
SUMO2	LEF1	1860567	1845704	ENSP00000405965	ENSP00000265165	0	0	0	0	0	0.576	0	0.364	0.719
BACE1	LRP1	1850057	1843653	ENSP00000318585	ENSP00000243077	0	0	0	0	0	0.576	0	0.873	0.944
HSP90A A1	LRP1	1851814	1843653	ENSP00000335153	ENSP00000243077	0	0	0	0	0	0.576	0	0.949	0.977
ATG12	MCL1	1861647	1854935	ENSP00000425107	ENSP00000358022	0	0	0	0	0	0.576	0	0.21	0.651
PCNA	MCL1	1856984	1854935	ENSP00000368438	ENSP00000358022	0	0	0	0	0	0.576	0	0.88	0.947
RAD52	MCM3	1853694	1843226	ENSP00000351284	ENSP00000229854	0	0	0	0	0	0.576	0	0.211	0.651
CDKN2A	MDM4	1859838	1854537	ENSP00000394932	ENSP00000356150	0	0	0	0	0	0.576	0	0.586	0.816
CHEK2	MDM4	1857546	1854537	ENSP00000372023	ENSP00000356150	0	0	0	0	0	0.576	0	0.916	0.963
SUMO1	MEF2B	1857989	1842283	ENSP00000376076	ENSP00000162023	0	0	0	0	0	0.576	0	0.059	0.583
CDKN2A	MTA1	1859838	1851603	ENSP00000394932	ENSP00000333633	0	0	0	0	0	0.576	0	0.168	0.632
GRB2	MTA1	1852164	1851603	ENSP00000339007	ENSP00000333633	0	0	0	0	0	0.576	0	0.067	0.587
JUN	MTA1	1855436	1851603	ENSP00000360266	ENSP00000333633	0	0	0	0	0	0.576	0	0.211	0.651
SRC	NOS2	1853652	1850906	ENSP00000350941	ENSP00000327251	0	0	0	0	0	0.576	0.9	0.278	0.966
SOD1	OPTN	1846132	1845269	ENSP00000270142	ENSP00000263036	0	0	0	0	0	0.576	0	0.398	0.733
GRB2	PAK1	1852164	1846573	ENSP00000339007	ENSP00000278568	0	0	0	0	0	0.576	0	0.333	0.705
MYLK	PAK1	1853981	1846573	ENSP00000353452	ENSP00000278568	0	0	0	0.64	0	0.576	0.8	0.645	0.931
MYLK	PAK2	1853981	1849679	ENSP00000353452	ENSP00000314067	0	0	0	0.657	0	0.576	0.8	0.591	0.929
CREB1	POU2F 1	1859295	1854675	ENSP00000387699	ENSP00000356840	0	0	0	0	0	0.576	0	0.347	0.711
CALM1	RAF1	1853445	1844086	ENSP00000349467	ENSP00000251849	0	0	0	0	0	0.576	0	0.259	0.672
PAK2	RAF1	1849679	1844086	ENSP00000314067	ENSP00000251849	0	0	0	0.652	0	0.576	0.9	0.75	0.967
BRCA1	RBL2	1861387	1845071	ENSP00000418960	ENSP00000262133	0	0	0	0	0	0.576	0.9	0.204	0.963
MCM7	RBL2	1848945	1845071	ENSP00000307288	ENSP00000262133	0	0	0	0	0.157	0.576	0	0.226	0.699
LRP1	SERPI NE1	1843653	1842959	ENSP00000243077	ENSP00000223095	0	0	0	0	0	0.576	0.9	0.506	0.977
CUL4A	SKP2	1856298	1846369	ENSP00000364589	ENSP00000274255	0	0	0	0	0	0.576	0	0.585	0.816
DDB1	SKP2	1848334	1846369	ENSP00000301764	ENSP00000274255	0	0	0	0	0	0.576	0	0.606	0.826
COL4A1	SMAD1	1856385	1848770	ENSP00000364979	ENSP00000305769	0	0	0	0	0	0.576	0	0.238	0.663
BRCA2	SMAD3	1857163	1851536	ENSP00000369497	ENSP00000332973	0	0	0	0	0	0.576	0	0.835	0.927
MAPK9	SMAD3	1859420	1851536	ENSP00000389338	ENSP00000332973	0	0	0	0	0	0.576	0	0.332	0.705



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MEF2A	SMAD4	1853046	1852473	ENSP00000346389	ENSP00000341551	0	0	0	0	0	0.576	0	0.392	0.731
EP300	SMAD7	1845316	1845078	ENSP00000263253	ENSP00000262158	0	0	0	0	0	0.576	0	0.779	0.902
LEF1	SMAD7	1845704	1845078	ENSP00000265165	ENSP00000262158	0	0	0	0	0	0.576	0	0.924	0.966
SRF	SMAD7	1845734	1845078	ENSP00000265354	ENSP00000262158	0	0	0	0	0	0.576	0	0.494	0.776
GRB10	SRC	1858657	1853652	ENSP00000381793	ENSP00000350941	0	0	0	0	0	0.576	0	0.538	0.795
MYLK	SRC	1853981	1853652	ENSP00000353452	ENSP00000350941	0	0	0	0.626	0	0.576	0	0.93	0.723
CREB1	SRF	1859295	1845734	ENSP00000387699	ENSP00000265354	0	0	0	0	0	0.576	0	0.785	0.905
SUMO1	SRF	1857989	1845734	ENSP00000376076	ENSP00000265354	0	0	0	0	0	0.576	0	0.258	0.672
UBE2I	SRF	1850693	1845734	ENSP00000324897	ENSP00000265354	0	0	0	0	0	0.576	0	0.168	0.632
CREB1	SUMO1	1859295	1857989	ENSP00000387699	ENSP00000376076	0	0	0	0	0	0.576	0	0.364	0.719
ATRIP	MCM2	1850516	1845676	ENSP00000323099	ENSP00000265056	0	0	0	0	0	0.576	0.9	0.281	0.966
ATRIP	CDC6	1850516	1842453	ENSP00000323099	ENSP00000209728	0	0	0	0	0	0.576	0.9	0.253	0.965
BIRC5	CDK4	1848314	1844551	ENSP00000301633	ENSP00000257904	0	0	0	0	0	0.576	0	0.927	0.968
BMI1	CDC6	1856537	1842453	ENSP00000365851	ENSP00000209728	0	0	0	0	0.073	0.576	0	0.243	0.676
BRCA1	SUPT5 H	1861387	1860450	ENSP00000418960	ENSP00000404029	0	0	0	0	0	0.576	0	0.163	0.629
CACYBP	UBE2I	1854646	1850693	ENSP00000356652	ENSP00000324897	0	0	0	0	0	0.576	0	0.071	0.589
MTA1	UBE2I	1851603	1850693	ENSP00000333633	ENSP00000324897	0	0	0	0	0	0.576	0	0.817	0.919
SMAD3	AXIN1	1851536	1845118	ENSP00000332973	ENSP00000262320	0	0	0	0	0	0.576	0.9	0.883	0.994
SUMO2	CDKN2 A	1860567	1859838	ENSP00000405965	ENSP00000394932	0	0	0	0	0	0.575	0	0.231	0.659
SOS1	CBL	1858968	1845465	ENSP00000384675	ENSP00000264033	0	0	0	0	0	0.574	0.9	0.492	0.976
UBE2I	EGF	1850693	1845705	ENSP00000324897	ENSP00000265171	0	0	0	0	0	0.574	0	0	0.574
BRCA2	PCNA	1857163	1856984	ENSP00000369497	ENSP00000368438	0	0	0	0	0	0.574	0	0.506	0.78
CDC20	EP300	1849070	1845316	ENSP00000308450	ENSP00000263253	0	0	0	0	0	0.573	0	0.151	0.621
UBE2I	FOS	1850693	1848822	ENSP00000324897	ENSP00000306245	0	0	0	0	0	0.573	0	0.307	0.691
SMAD1	MED15	1848770	1845304	ENSP00000305769	ENSP00000263205	0	0	0	0	0	0.573	0	0.131	0.613
SMAD3	MED15	1851536	1845304	ENSP00000332973	ENSP00000263205	0	0	0	0	0	0.573	0.9	0.266	0.965
SMAD4	MED15	1852473	1845304	ENSP00000341551	ENSP00000263205	0	0	0	0	0	0.573	0.9	0.356	0.97
CDT1	RBX1	1848231	1842568	ENSP00000301019	ENSP00000216225	0	0	0	0	0	0.573	0	0.355	0.712
CDT1	SKP1	1848231	1843292	ENSP00000301019	ENSP00000231487	0	0	0	0	0	0.573	0	0.358	0.714
PCNA	POLR2 A	1856984	1849743	ENSP00000368438	ENSP00000314949	0	0	0	0	0	0.573	0	0.427	0.744
SKP2	BARD1	1846369	1844829	ENSP00000274255	ENSP00000260947	0	0	0	0	0.071	0.572	0	0.181	0.645
BRCA1	RBX1	1861387	1842568	ENSP00000418960	ENSP00000216225	0	0	0	0	0	0.572	0.9	0.309	0.967
BRCA1	SKP1	1861387	1843292	ENSP00000418960	ENSP00000231487	0	0	0	0	0	0.572	0	0.31	0.692
BRCA1	SKP2	1861387	1846369	ENSP00000418960	ENSP00000274255	0	0	0	0	0	0.572	0	0.359	0.713
EGFR	BIRC2	1846445	1843127	ENSP00000275493	ENSP00000227758	0	0	0	0	0	0.571	0	0.387	0.726
EGFR	BIRC3	1846445	1845359	ENSP00000275493	ENSP00000263464	0	0	0	0	0	0.571	0	0.397	0.73
CBL	GAPDH	1845465	1843185	ENSP00000264033	ENSP00000229239	0	0	0	0	0	0.571	0	0.358	0.712
SUMO2	RBBP5	1860567	1845562	ENSP00000405965	ENSP00000264515	0	0	0	0	0	0.571	0	0	0.571
UBE2I	RBBP5	1850693	1845562	ENSP00000324897	ENSP00000264515	0	0	0	0	0	0.571	0	0	0.571
SUMO1	SKP1	1857989	1843292	ENSP00000376076	ENSP00000231487	0	0	0	0	0.14	0.571	0	0.372	0.748
SUMO1	SKP2	1857989	1846369	ENSP00000376076	ENSP00000274255	0	0	0	0	0	0.571	0	0.193	0.638

EGFR	NEDD8	1846445	1844012	ENSP00000275493	ENSP00000250495	0	0	0	0	0	0.571	0	0.195	0.639
CTNNB1	BIRC5	1852818	1848314	ENSP00000344456	ENSP00000301633	0	0	0	0	0	0.57	0	0.945	0.975
HDAC3	BUB1B	1848477	1847075	ENSP00000302967	ENSP00000287598	0	0	0	0	0	0.57	0	0.143	0.615
FOS	OPTN	1848822	1845269	ENSP00000306245	ENSP00000263036	0	0	0	0	0	0.57	0	0.137	0.613
SHC1	PAK1	1860266	1846573	ENSP00000401303	ENSP00000278568	0	0	0	0	0	0.57	0	0.172	0.629
BRCA1	RAD18	1861387	1845644	ENSP00000418960	ENSP00000264926	0	0	0	0	0	0.57	0	0.508	0.779
PCNA	RPA2	1856984	1856012	ENSP00000368438	ENSP00000363021	0	0	0	0	0.74	0.57	0.9	0.696	0.996
ORC1	SKP2	1855507	1846369	ENSP00000360621	ENSP00000274255	0	0	0	0	0.288	0.57	0	0.439	0.813
POU2F1	BARD1	1854675	1844829	ENSP00000356840	ENSP00000260947	0	0	0	0	0	0.569	0	0.047	0.571
POLR2A	BARD1	1849743	1844829	ENSP00000314949	ENSP00000260947	0	0	0	0	0	0.569	0	0.233	0.656
CHEK2	CUL4A	1857546	1856298	ENSP00000372023	ENSP00000364589	0	0	0	0	0	0.569	0	0.295	0.683
SUMO1	FOS	1857989	1848822	ENSP00000376076	ENSP00000306245	0	0	0	0	0	0.569	0	0.86	0.937
POU2F1	GAPDH	1854675	1843185	ENSP00000356840	ENSP00000229239	0	0	0	0	0	0.569	0	0.211	0.645
SMAD3	JUND	1851536	1844164	ENSP00000332973	ENSP00000252818	0	0	0	0	0	0.569	0	0.94	0.973
SMAD4	JUND	1852473	1844164	ENSP00000341551	ENSP00000252818	0	0	0	0	0	0.569	0	0.385	0.723
BRCA2	RPA2	1857163	1856012	ENSP00000369497	ENSP00000363021	0	0	0	0	0	0.569	0.9	0.345	0.969
JUN	SMAD4	1855436	1852473	ENSP00000360266	ENSP00000341551	0	0	0	0	0	0.569	0.9	0.727	0.987
BRCA1	HSP90 AA1	1861387	1851814	ENSP00000418960	ENSP00000335153	0	0	0	0	0	0.569	0	0.39	0.725
BRCA2	RPA1	1857163	1844316	ENSP00000369497	ENSP00000254719	0	0	0	0	0	0.569	0.9	0.384	0.971
CHEK2	CUL1	1857546	1850867	ENSP00000372023	ENSP00000326804	0	0	0	0	0.065	0.569	0	0.866	0.941
MEF2A	UBE2I	1853046	1850693	ENSP00000346389	ENSP00000324897	0	0	0	0	0	0.569	0	0.253	0.664
SNF8	POLR2 A	1861527	1849743	ENSP00000421380	ENSP00000314949	0	0	0	0	0	0.569	0	0	0.569
SNF8	MCM2	1861527	1845676	ENSP00000421380	ENSP00000265056	0	0	0	0	0	0.569	0	0.066	0.58
SRC	SMARC B1	1853652	1845291	ENSP00000350941	ENSP00000263121	0	0	0	0	0	0.569	0	0.169	0.626
SUMO2	RPA1	1860567	1844316	ENSP00000405965	ENSP00000254719	0	0	0	0	0.069	0.568	0	0.21	0.655
SUMO2	MCM2	1860567	1845676	ENSP00000405965	ENSP00000265056	0	0	0	0	0	0.568	0	0	0.568
BIRC3	BIRC2	1845359	1843127	ENSP00000263464	ENSP00000227758	0	0	0	0.979	0	0.567	0.9	0.937	0.955
RAF1	BIRC2	1844086	1843127	ENSP00000251849	ENSP00000227758	0	0	0	0	0	0.567	0	0.196	0.636
SUMO1	CTNNB 1	1857989	1852818	ENSP00000376076	ENSP00000344456	0	0	0	0	0	0.567	0	0.216	0.646
ATRIP	MCM7	1850516	1848945	ENSP00000323099	ENSP00000307288	0	0	0	0	0	0.567	0.9	0.889	0.994
BIRC3	RAF1	1845359	1844086	ENSP00000263464	ENSP00000251849	0	0	0	0	0	0.567	0	0.22	0.647
LCK	SMAD3	1852042	1851536	ENSP00000337825	ENSP00000332973	0	0	0	0	0	0.567	0	0.217	0.646
PSMD4	SOD1	1854905	1846132	ENSP00000357879	ENSP00000270142	0	0	0	0	0.072	0.567	0	0.066	0.591
BRCA1	SRC	1861387	1853652	ENSP00000418960	ENSP00000350941	0	0	0	0	0	0.567	0	0.471	0.761
BRCA1	SMARC C1	1861387	1844297	ENSP00000418960	ENSP00000254480	0	0	0	0	0	0.567	0	0.29	0.679
BRCA1	SMARC B1	1861387	1845291	ENSP00000418960	ENSP00000263121	0	0	0	0	0	0.567	0	0.357	0.709
CDKN2A	MAPK8	1859838	1853988	ENSP00000394932	ENSP00000353483	0	0	0	0	0	0.567	0	0.384	0.722
SMAD3	BACH1	1851536	1847037	ENSP00000332973	ENSP00000286800	0	0	0	0	0	0.566	0	0	0.566
SUMO1	CASP8	1857989	1853692	ENSP00000376076	ENSP00000351273	0	0	0	0	0	0.566	0	0.809	0.913

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CDKN2A	EP300	1859838	1845316	ENSP00000394932	ENSP00000263253	0	0	0	0	0	0.566	0	0.53	0.787
MCL1	FBXW7	1854935	1846740	ENSP00000358022	ENSP00000281708	0	0	0	0	0	0.566	0	0.408	0.732
CTNNB1	SMAD4	1852818	1852473	ENSP00000344456	ENSP00000341551	0	0	0	0	0	0.566	0.9	0.896	0.995
CASP8	SRF	1853692	1845734	ENSP00000351273	ENSP00000265354	0	0	0	0	0	0.566	0	0.087	0.587
CASP9	SRF	1851230	1845734	ENSP00000330237	ENSP00000265354	0	0	0	0	0	0.566	0	0.069	0.578
AURKB	CALM1	1863844	1853445	ENSP00000463999	ENSP00000349467	0	0	0	0	0	0.564	0	0	0.564
CALM1	CBL	1853445	1845465	ENSP00000349467	ENSP00000264033	0	0	0	0	0	0.564	0	0	0.564
CKS1B	CDC20	1849378	1849070	ENSP00000311083	ENSP00000308450	0	0	0	0	0.435	0.564	0	0.706	0.921
AURKB	CDC20	1863844	1849070	ENSP00000463999	ENSP00000308450	0	0	0	0	0.288	0.564	0.9	0.912	0.996
CTNNB1	DDB1	1852818	1848334	ENSP00000344456	ENSP00000301764	0	0	0	0	0	0.564	0	0.184	0.629
MDM4	EP300	1854537	1845316	ENSP00000356150	ENSP00000263253	0	0	0	0	0	0.564	0	0.475	0.761
CD2	FYN	1855033	1853081	ENSP00000358490	ENSP00000346671	0	0	0	0	0	0.564	0	0.329	0.694
JUN	GGA1	1855436	1852447	ENSP00000360266	ENSP00000341344	0	0	0	0	0	0.564	0	0.058	0.571
SUMO1	RAC1	1857989	1853302	ENSP00000376076	ENSP00000348461	0	0	0	0	0	0.564	0	0.114	0.597
SUMO2	RAC1	1860567	1853302	ENSP00000405965	ENSP00000348461	0	0	0	0	0	0.564	0	0.047	0.566
MAPK8	RAD18	1853988	1845644	ENSP00000353483	ENSP00000264926	0	0	0	0	0	0.564	0	0.1	0.59
RBL2	RAF1	1845071	1844086	ENSP00000262133	ENSP00000251849	0	0	0	0	0	0.564	0	0.129	0.604
BRF1	RBL2	1862499	1845071	ENSP00000448323	ENSP00000262133	0	0	0	0	0.09	0.564	0	0	0.586
CUL1	RBL2	1850867	1845071	ENSP00000326804	ENSP00000262133	0	0	0	0	0	0.564	0.9	0.085	0.956
CRBN	RBX1	1843306	1842568	ENSP00000231948	ENSP00000216225	0	0	0	0	0	0.564	0.9	0.517	0.977
SMAD3	RBX1	1851536	1842568	ENSP00000332973	ENSP00000216225	0	0	0	0	0	0.564	0	0.092	0.587
RBL2	SKP1	1845071	1843292	ENSP00000262133	ENSP00000231487	0	0	0	0	0	0.564	0.9	0.298	0.966
BRCA1	SMAD1	1861387	1848770	ENSP00000418960	ENSP00000305769	0	0	0	0	0	0.564	0	0.045	0.565
MDM4	SMAD3	1854537	1851536	ENSP00000356150	ENSP00000332973	0	0	0	0	0	0.564	0	0.159	0.617
SRC	SMAD3	1853652	1851536	ENSP00000350941	ENSP00000332973	0	0	0	0	0	0.564	0	0.512	0.778
BRCA1	SMAD4	1861387	1852473	ENSP00000418960	ENSP00000341551	0	0	0	0	0	0.564	0	0.501	0.773
MDM4	SMAD4	1854537	1852473	ENSP00000356150	ENSP00000341551	0	0	0	0	0	0.564	0	0.824	0.92
SKP2	SMAD7	1846369	1845078	ENSP00000274255	ENSP00000262158	0	0	0	0	0	0.564	0	0.235	0.652
HDAC3	SMARCA2	1848477	1845805	ENSP00000302967	ENSP00000265773	0	0	0	0	0.1	0.564	0	0.726	0.883
PCNA	CDC6	1856984	1842453	ENSP00000368438	ENSP00000209728	0	0	0	0	0.178	0.564	0.9	0.833	0.993
RAD18	ORC2	1845644	1843392	ENSP00000264926	ENSP00000234296	0	0	0	0	0	0.564	0	0	0.564
CHEK2	PCNA	1857546	1856984	ENSP00000372023	ENSP00000368438	0	0	0	0	0.094	0.562	0	0.768	0.9
CDC20	CDT1	1849070	1848231	ENSP00000308450	ENSP00000301019	0	0	0	0	0.178	0.561	0	0.358	0.748
HSP90AA1	CKS1B	1851814	1849378	ENSP00000335153	ENSP00000311083	0	0	0	0	0	0.561	0	0.115	0.594
CDK4	SKP1	1844551	1843292	ENSP00000257904	ENSP00000231487	0	0	0	0	0.067	0.561	0.9	0.674	0.984
POLR2A	DDB1	1849743	1848334	ENSP00000314949	ENSP00000301764	0	0	0	0	0.084	0.556	0	0.103	0.603
AURKB	EP300	1863844	1845316	ENSP00000463999	ENSP00000263253	0	0	0	0	0	0.556	0	0.254	0.654
BRCA1	ORC2	1861387	1843392	ENSP00000418960	ENSP00000234296	0	0	0	0	0	0.556	0	0.075	0.571
PCNA	NEDD8	1856984	1844012	ENSP00000368438	ENSP00000250495	0	0	0	0	0.093	0.546	0	0.243	0.661
HSP90AA1	MCM3	1851814	1843226	ENSP00000335153	ENSP00000229854	0	0	0	0	0.112	0.538	0	0.117	0.606
PTRPJ	GRB2	1860195	1852164	ENSP00000400010	ENSP00000339007	0	0	0	0	0	0.537	0	0.384	0.703

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SUMO2	SUPT5 H	1860567	1860450	ENSP00000405965	ENSP00000404029	0	0	0	0	0	0.523	0	0	0.523
SUMO2	WDR5	1860567	1853715	ENSP00000405965	ENSP00000351446	0	0	0	0	0	0.517	0	0.128	0.56
SUMO2	CEBPB	1860567	1848728	ENSP00000405965	ENSP00000305422	0	0	0	0	0	0.507	0	0.171	0.574
SUMO2	FANCD 2	1860567	1847078	ENSP00000405965	ENSP00000287647	0	0	0	0	0	0.507	0	0.204	0.591
SUMO2	PSMD8	1860567	1842478	ENSP00000405965	ENSP00000215071	0	0	0	0	0.112	0.507	0	0.053	0.549
SUMO2	ARHGD IA	1860567	1846084	ENSP00000405965	ENSP00000269321	0	0	0	0	0	0.507	0	0.071	0.523
SUMO2	RFC1	1860567	1857450	ENSP00000405965	ENSP00000371321	0	0	0	0	0	0.504	0	0.061	0.515
SUMO2	WDHD1	1860567	1854036	ENSP00000405965	ENSP00000353793	0	0	0	0	0	0.504	0	0	0.504
CACYBP	HSP90 AA1	1854646	1851814	ENSP00000356652	ENSP00000335153	0	0	0	0	0.391	0.5	0	0.191	0.732
SUMO2	CDC34	1860567	1842491	ENSP00000405965	ENSP00000215574	0	0	0	0	0.073	0.499	0	0.276	0.634
FBXL3	CDC34	1853221	1842491	ENSP00000347834	ENSP00000215574	0	0	0	0	0	0.491	0	0	0.491
RAD51	BARD1	1857551	1844829	ENSP00000372088	ENSP00000260947	0	0	0	0	0	0.488	0.9	0.647	0.98
CREB1	MED15	1859295	1845304	ENSP00000387699	ENSP00000263205	0	0	0	0	0	0.484	0	0.399	0.676
FBXW7	MED15	1846740	1845304	ENSP00000281708	ENSP00000263205	0	0	0	0	0	0.469	0	0.101	0.502
HDAC3	RBL2	1848477	1845071	ENSP00000302967	ENSP00000262133	0	0	0	0	0	0.469	0	0.704	0.836
S100A8	GRB2	1854859	1852164	ENSP00000357721	ENSP00000339007	0	0	0	0	0	0.462	0	0.18	0.539
ASH2L	EP300	1852381	1845316	ENSP00000340896	ENSP00000263253	0	0	0	0	0	0.459	0	0.206	0.552
ORC1	CDK4	1855507	1844551	ENSP00000360621	ENSP00000257904	0	0	0	0	0.112	0.45	0	0.33	0.644
SUMO2	GAPDH	1860567	1843185	ENSP00000405965	ENSP00000229239	0	0	0	0	0.082	0.447	0	0.3	0.614
SUMO1	POLR2 A	1857989	1849743	ENSP00000376076	ENSP00000314949	0	0	0	0	0	0.443	0	0.171	0.518
HDAC3	JUND	1848477	1844164	ENSP00000302967	ENSP00000252818	0	0	0	0	0	0.436	0	0.343	0.613
BUB1B	RBX1	1847075	1842568	ENSP00000287598	ENSP00000216225	0	0	0	0	0	0.436	0.72	0	0.835
MCM7	CALM2	1848945	1846243	ENSP00000307288	ENSP00000272298	0	0	0	0	0.086	0.433	0	0	0.459
BMI1	SMARC A2	1856537	1845805	ENSP00000365851	ENSP00000265773	0	0	0	0	0	0.432	0	0.417	0.655
CHEK2	RFC3	1857546	1857148	ENSP00000372023	ENSP00000369411	0	0	0	0	0.115	0.431	0	0.358	0.648
CHEK2	MAD2L 1	1857546	1847745	ENSP00000372023	ENSP00000296509	0	0	0	0	0.112	0.428	0	0.214	0.565
RUVBL2	EP300	1864926	1845316	ENSP00000473172	ENSP00000263253	0	0	0	0	0	0.426	0	0.255	0.555
MAPK9	EGFR	1859420	1846445	ENSP00000389338	ENSP00000275493	0	0	0	0.621	0	0.425	0	0.597	0.551
MAPK8	EGFR	1853988	1846445	ENSP00000353483	ENSP00000275493	0	0	0	0.622	0	0.425	0	0.939	0.628
EGFR	LRP1	1846445	1843653	ENSP00000275493	ENSP00000243077	0	0	0	0	0	0.425	0	0.275	0.565
CKS1B	CDK4	1849378	1844551	ENSP00000311083	ENSP00000257904	0	0	0	0	0.147	0.424	0	0.807	0.897
VPS36	ATG7	1856803	1853051	ENSP00000367299	ENSP00000346437	0	0	0	0	0	0.421	0	0.096	0.454
SUMO2	MCM5	1860567	1842548	ENSP00000405965	ENSP00000216122	0	0	0	0	0	0.41	0	0	0.41
SUMO2	MCM6	1860567	1845487	ENSP00000405965	ENSP00000264156	0	0	0	0	0	0.41	0	0.041	0.41
SUMO2	SMARC A2	1860567	1845805	ENSP00000405965	ENSP00000265773	0	0	0	0	0	0.406	0	0.211	0.512
FYN	PAK2	1853081	1849679	ENSP00000346671	ENSP00000314067	0	0	0.364	0.626	0	0.403	0.9	0.284	0.95
LCK	PAK2	1852042	1849679	ENSP00000337825	ENSP00000314067	0	0	0.333	0.629	0	0.403	0.9	0.42	0.952

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SOS1	HSP90 AA1	1858968	1851814	ENSP00000384675	ENSP00000335153	0	0	0	0	0	0.403	0.9	0.065	0.939
SUMO2	MTA1	1860567	1851603	ENSP00000405965	ENSP00000333633	0	0	0	0	0	0.401	0	0.138	0.462
SUMO2	POLR2 B	1860567	1849572	ENSP00000405965	ENSP00000312735	0	0	0	0	0.084	0.4	0	0.149	0.492
SUMO2	PSMD1 2	1860567	1853297	ENSP00000405965	ENSP00000348442	0	0	0	0	0.111	0.4	0	0.053	0.451
SUMO2	NXF1	1860567	1847469	ENSP00000405965	ENSP00000294172	0	0	0	0	0	0.397	0	0.081	0.422
HSP90A A1	SKP2	1851814	1846369	ENSP00000335153	ENSP00000274255	0	0	0	0	0	0.389	0	0.243	0.518
WDR5	DDB1	1853715	1848334	ENSP00000351446	ENSP00000301764	0	0	0	0	0	0.386	0	0.251	0.521
CHEK2	RAD18	1857546	1845644	ENSP00000372023	ENSP00000264926	0	0	0	0	0.08	0.385	0	0.556	0.727
CUL4A	CUL1	1856298	1850867	ENSP00000364589	ENSP00000326804	0	0	0	0.784	0	0.384	0	0.919	0.505
SUMO2	ATG7	1860567	1853051	ENSP00000405965	ENSP00000346437	0	0	0	0	0	0.372	0	0.221	0.49
GRB2	HSP90 AA1	1852164	1851814	ENSP00000339007	ENSP00000335153	0	0	0	0	0	0.369	0	0.393	0.6
CUL4A	FBXW7	1856298	1846740	ENSP00000364589	ENSP00000281708	0	0	0	0	0	0.368	0	0.683	0.791
PCNA	DDB1	1856984	1848334	ENSP00000368438	ENSP00000301764	0	0	0	0	0	0.365	0	0.578	0.721
HSP90A A1	DMC1	1851814	1842529	ENSP00000335153	ENSP00000216024	0	0	0	0	0.087	0.363	0	0.269	0.537
PSMD14	SKP1	1859182	1843292	ENSP00000386541	ENSP00000231487	0	0	0	0	0.096	0.363	0.9	0.28	0.953
ORC1	RAD52	1855507	1853694	ENSP00000360621	ENSP00000351284	0	0	0	0	0	0.363	0	0.142	0.43
RAD51	HSP90 AA1	1857551	1851814	ENSP00000372088	ENSP00000335153	0	0	0	0	0.087	0.363	0	0.404	0.623
SKP1	PSMD7	1843292	1842741	ENSP00000231487	ENSP00000219313	0	0	0	0	0.094	0.363	0.9	0.121	0.942
WDHD1	DMC1	1854036	1842529	ENSP00000353793	ENSP00000216024	0	0	0	0	0	0.362	0	0.173	0.449
BRF1	POLR2 C	1862499	1842734	ENSP00000448323	ENSP00000219252	0	0	0	0	0	0.362	0	0.199	0.467
RAD51	WDHD1	1857551	1854036	ENSP00000372088	ENSP00000353793	0	0	0	0	0.073	0.362	0	0.346	0.579
ATG7	ATG5	1853051	1852683	ENSP00000346437	ENSP00000343313	0	0	0	0	0	0.361	0	0.96	0.973
CASP8	ATG5	1853692	1852683	ENSP00000351273	ENSP00000343313	0	0	0	0	0	0.361	0	0.815	0.877
ING4	HDAC3	1858422	1848477	ENSP00000380024	ENSP00000302967	0	0	0	0	0	0.361	0	0.378	0.585
FBXW7	JUND	1846740	1844164	ENSP00000281708	ENSP00000252818	0	0	0	0	0	0.361	0	0.164	0.443
SMARC A2	JUND	1845805	1844164	ENSP00000265773	ENSP00000252818	0	0	0	0	0	0.361	0	0.266	0.511
FEN1	RAD18	1848737	1845644	ENSP00000305480	ENSP00000264926	0	0	0	0	0.072	0.361	0	0.621	0.756
BRF1	POLR2 E	1862499	1842493	ENSP00000448323	ENSP00000215587	0	0	0	0	0	0.361	0.9	0.557	0.969
CHEK2	MCM2	1857546	1845676	ENSP00000372023	ENSP00000265056	0	0	0	0	0.346	0.361	0	0.544	0.792
JUN	SMARC A2	1855436	1845805	ENSP00000360266	ENSP00000265773	0	0	0	0	0	0.361	0	0.441	0.628
EP300	MCM3	1845316	1843226	ENSP00000263253	ENSP00000229854	0	0	0	0	0	0.36	0	0.181	0.453
EP300	MCM4	1845316	1845065	ENSP00000263253	ENSP00000262105	0	0	0	0	0	0.36	0	0.116	0.41
EP300	MCM5	1845316	1842548	ENSP00000263253	ENSP00000216122	0	0	0	0	0	0.36	0	0.235	0.489
FYN	KRAS	1853081	1844404	ENSP00000346671	ENSP00000256078	0	0	0	0	0.113	0.36	0.9	0.436	0.963
SRC	KRAS	1853652	1844404	ENSP00000350941	ENSP00000256078	0	0	0	0	0.113	0.36	0	0.86	0.914
CHEK2	HDAC3	1857546	1848477	ENSP00000372023	ENSP00000302967	0	0	0	0	0	0.359	0	0.328	0.551

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ORC1	MAD2L1	1855507	1847745	ENSP00000360621	ENSP00000296509	0	0	0	0	0.157	0.359	0	0.047	0.44
ATG12	UBA2	1861647	1843822	ENSP00000425107	ENSP00000246548	0	0	0	0	0	0.359	0	0.416	0.61
FGF1	HSP90AA1	1852115	1851814	ENSP00000338548	ENSP00000335153	0	0	0	0	0	0.359	0	0.241	0.492
RAD18	RPA1	1845644	1844316	ENSP00000264926	ENSP00000254719	0	0	0	0	0	0.359	0	0.313	0.54
CHEK2	CDC6	1857546	1842453	ENSP00000372023	ENSP00000209728	0	0	0	0	0.249	0.357	0	0.721	0.853
SRF	MCM5	1845734	1842548	ENSP00000265354	ENSP00000216122	0	0	0	0	0	0.352	0	0.282	0.515
GRB2	PAK2	1852164	1849679	ENSP00000339007	ENSP00000314067	0	0	0	0	0	0.348	0	0.339	0.55
PAK2	SH3RF1	1849679	1846918	ENSP00000314067	ENSP00000284637	0	0	0	0	0	0.348	0	0.191	0.449
RAD51	CHEK2	1857551	1857546	ENSP00000372088	ENSP00000372023	0	0	0	0	0.091	0.346	0	0.761	0.845
CHEK2	DMC1	1857546	1842529	ENSP00000372023	ENSP00000216024	0	0	0	0	0.065	0.346	0	0.381	0.588
RFC1	RPA2	1857450	1856012	ENSP00000371321	ENSP00000363021	0	0	0	0	0.076	0.344	0	0.143	0.435
ORC1	CKS1B	1855507	1849378	ENSP00000360621	ENSP00000311083	0	0	0	0	0.095	0.343	0	0.106	0.422
CUL4A	RBBP5	1856298	1845562	ENSP00000364589	ENSP00000264515	0	0	0	0	0	0.343	0	0.193	0.447
RFC5	RPA2	1860712	1856012	ENSP00000408295	ENSP00000363021	0	0	0	0	0.289	0.343	0.9	0.078	0.951
CUL4A	WDR5	1856298	1853715	ENSP00000364589	ENSP00000351446	0	0	0	0	0	0.343	0	0.325	0.537
SUMO1	DMC1	1857989	1842529	ENSP00000376076	ENSP00000216024	0	0	0	0	0	0.342	0	0.179	0.437
SUMO2	DMC1	1860567	1842529	ENSP00000405965	ENSP00000216024	0	0	0	0	0	0.342	0	0.155	0.42
CDKN2A	DDB1	1859838	1848334	ENSP00000394932	ENSP00000301764	0	0	0	0	0	0.341	0	0.163	0.424
CDK4	JUND	1844551	1844164	ENSP00000257904	ENSP00000252818	0	0	0	0	0	0.337	0.9	0.796	0.985
JUN	CDK4	1855436	1844551	ENSP00000360266	ENSP00000257904	0	0	0	0	0	0.337	0	0.895	0.928
MBP	PAK2	1857547	1849679	ENSP00000372025	ENSP00000314067	0	0	0	0	0	0.335	0	0.471	0.633
RHOA	PAK2	1860210	1849679	ENSP00000400175	ENSP00000314067	0	0	0	0	0	0.333	0	0.601	0.722
BRCA1	RFC1	1861387	1857450	ENSP00000418960	ENSP00000371321	0	0	0	0	0	0.333	0	0.24	0.471
MCM3	APEX1	1843226	1842615	ENSP00000229854	ENSP00000216714	0	0	0	0	0.411	0.333	0	0.076	0.605
MCM7	APEX1	1848945	1842615	ENSP00000307288	ENSP00000216714	0	0	0	0	0.42	0.333	0	0.154	0.644
CDK4	MCM3	1844551	1843226	ENSP00000257904	ENSP00000229854	0	0	0	0	0.157	0.332	0	0.785	0.869
AURKB	BIRC2	1863844	1843127	ENSP00000463999	ENSP00000227758	0	0	0	0	0.113	0.326	0	0.473	0.658
AURKB	BIRC3	1863844	1845359	ENSP00000463999	ENSP00000263464	0	0	0	0	0.113	0.326	0	0.451	0.643
PTPRJ	LCK	1860195	1852042	ENSP00000400010	ENSP00000337825	0	0	0	0	0	0.325	0	0.868	0.907
BMI1	EP300	1856537	1845316	ENSP00000365851	ENSP00000263253	0	0	0	0	0	0.321	0	0.302	0.505
RPA2	RAD18	1856012	1845644	ENSP00000363021	ENSP00000264926	0	0	0	0	0	0.321	0	0.382	0.562
BMI1	SMARCC1	1856537	1844297	ENSP00000365851	ENSP00000254480	0	0	0	0	0	0.321	0	0.159	0.404
BMI1	WDR5	1856537	1853715	ENSP00000365851	ENSP00000351446	0	0	0	0	0.078	0.321	0	0.267	0.501
MAD2L1	MCM3	1847745	1843226	ENSP00000296509	ENSP00000229854	0	0	0	0	0.24	0.32	0	0.409	0.668
GRB2	GAPDH	1852164	1843185	ENSP00000339007	ENSP00000229239	0	0	0	0	0	0.317	0	0.48	0.629
NEDD8	GAPDH	1844012	1843185	ENSP00000250495	ENSP00000229239	0	0	0	0	0	0.317	0	0.214	0.44
SHC1	HGF	1860266	1842916	ENSP00000401303	ENSP00000222390	0	0	0	0	0	0.317	0	0.348	0.535
SUMO2	SKP1	1860567	1843292	ENSP00000405965	ENSP00000231487	0	0	0	0	0.14	0.314	0	0.101	0.423
MAPK9	RAC1	1859420	1853302	ENSP00000389338	ENSP00000348461	0	0	0	0	0	0.313	0.9	0.66	0.974
MAPK8	RAC1	1853988	1853302	ENSP00000353483	ENSP00000348461	0	0	0	0	0	0.313	0.9	0.773	0.983

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SUMO2	CUL4A	1860567	1856298	ENSP00000405965	ENSP00000364589	0	0	0	0	0	0.312	0	0.327	0.517
BUB1B	MAD1L 1	1847075	1845817	ENSP00000287598	ENSP00000265854	0	0	0	0	0	0.311	0.9	0.789	0.984
RAD18	CDC34	1845644	1842491	ENSP00000264926	ENSP00000215574	0	0	0	0	0	0.31	0	0.451	0.605
MAD2L1	CDK4	1847745	1844551	ENSP00000296509	ENSP00000257904	0	0	0	0	0.226	0.309	0	0.355	0.625
ORC1	HDAC3	1855507	1848477	ENSP00000360621	ENSP00000302967	0	0	0	0	0.07	0.308	0	0.184	0.429
BRF1	POLR2 F	1862499	1860435	ENSP00000448323	ENSP00000403852	0	0	0	0	0	0.308	0.9	0.371	0.952
BRF1	POLR2 L	1862499	1850615	ENSP00000448323	ENSP00000324124	0	0	0	0	0	0.308	0.9	0.222	0.941
GRB10	GRB2	1858657	1852164	ENSP00000381793	ENSP00000339007	0	0	0	0	0	0.307	0	0.723	0.8
MET	JUND	1849944	1844164	ENSP00000317272	ENSP00000252818	0	0	0	0	0	0.306	0	0.186	0.411
JUN	MET	1855436	1849944	ENSP00000360266	ENSP00000317272	0	0	0	0	0	0.306	0	0.542	0.669
WDHD1	RAD18	1854036	1845644	ENSP00000353793	ENSP00000264926	0	0	0	0	0	0.305	0	0.291	0.486
CHEK2	SMARC A2	1857546	1845805	ENSP00000372023	ENSP00000265773	0	0	0	0	0.069	0.305	0	0.301	0.508
CUL4A	SMARC A2	1856298	1845805	ENSP00000364589	ENSP00000265773	0	0	0	0	0	0.305	0	0.194	0.416
MCM7	SRF	1848945	1845734	ENSP00000307288	ENSP00000265354	0	0	0	0	0	0.304	0	0.581	0.696
CDC34	CDC6	1842491	1842453	ENSP00000215574	ENSP00000209728	0	0	0	0	0	0.304	0	0.512	0.646
JUN	PSMD4	1855436	1854905	ENSP00000360266	ENSP00000357879	0	0	0	0	0	0.304	0	0.24	0.448
RAD52	CDC34	1853694	1842491	ENSP00000351284	ENSP00000215574	0	0	0	0	0	0.303	0	0.228	0.439
SKP1	MCM3	1843292	1843226	ENSP00000231487	ENSP00000229854	0	0	0	0	0.081	0.303	0	0.177	0.426
EP300	SMARC C1	1845316	1844297	ENSP00000263253	ENSP00000254480	0	0	0	0	0	0.303	0	0.413	0.573
RANGAP 1	NXT1	1853317	1844345	ENSP00000348577	ENSP00000254998	0	0	0	0	0	0.303	0	0.346	0.524
PTPRJ	CBL	1860195	1845465	ENSP00000400010	ENSP00000264033	0	0	0	0	0	0.302	0	0.213	0.427
PSMD14	CUL4A	1859182	1856298	ENSP00000386541	ENSP00000364589	0	0	0	0	0	0.302	0	0.38	0.549
RAC1	JUND	1853302	1844164	ENSP00000348461	ENSP00000252818	0	0	0	0	0	0.302	0	0.51	0.644
PSMD4	PAK2	1854905	1849679	ENSP00000357879	ENSP00000314067	0	0	0	0	0	0.302	0.9	0	0.927
JUN	RAC1	1855436	1853302	ENSP00000360266	ENSP00000348461	0	0	0	0	0	0.302	0	0.982	0.987
CDC20	RBX1	1849070	1842568	ENSP00000308450	ENSP00000216225	0	0	0	0	0	0.302	0	0.284	0.479
HRAS	PAK1	1849235	1846573	ENSP00000309845	ENSP00000278568	0	0	0	0	0	0.301	0	0.459	0.606
UBE2I	SKP1	1850693	1843292	ENSP00000324897	ENSP00000231487	0	0	0	0	0.09	0.301	0.9	0.402	0.956
PAK1	KRAS	1846573	1844404	ENSP00000278568	ENSP00000256078	0	0	0	0	0	0.301	0	0.459	0.606
PAK2	HRAS	1849679	1849235	ENSP00000314067	ENSP00000309845	0	0	0	0	0	0.301	0.9	0.459	0.958
PAK2	KRAS	1849679	1844404	ENSP00000314067	ENSP00000256078	0	0	0	0	0	0.301	0	0.468	0.612
SUMO1	CDC34	1857989	1842491	ENSP00000376076	ENSP00000215574	0	0	0	0	0.073	0.3	0	0.457	0.617
ORC1	CDC20	1855507	1849070	ENSP00000360621	ENSP00000308450	0	0	0	0	0.141	0.298	0	0.218	0.487
POLR2B	DMC1	1849572	1842529	ENSP00000312735	ENSP00000216024	0	0	0	0	0	0.298	0	0.34	0.516
GRB2	EP300	1852164	1845316	ENSP00000339007	ENSP00000263253	0	0	0	0	0	0.298	0	0.235	0.44
RAD51	MAD2L 1	1857551	1847745	ENSP00000372088	ENSP00000296509	0	0	0	0	0.112	0.298	0	0.161	0.432
UBE2I	RBX1	1850693	1842568	ENSP00000324897	ENSP00000216225	0	0	0	0	0.086	0.298	0.9	0.329	0.951

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EP300	SMARC B1	1845316	1845291	ENSP00000263253	ENSP00000263121	0	0	0	0	0	0.298	0	0.402	0.562
RAD51	POLR2 B	1857551	1849572	ENSP00000372088	ENSP00000312735	0	0	0	0	0	0.298	0	0.359	0.53
SUMO2	RFC4	1860567	1847705	ENSP00000405965	ENSP00000296273	0	0	0	0	0.081	0.298	0	0.247	0.472
GRB2	LCK	1852164	1852042	ENSP00000339007	ENSP00000337825	0	0	0	0.765	0.081	0.297	0.9	0.795	0.942
RHOA	RAC1	1860210	1853302	ENSP00000400175	ENSP00000348461	0	0	0.504	0.954	0.081	0.297	0.9	0.959	0.934
CHEK2	MCM5	1857546	1842548	ENSP00000372023	ENSP00000216122	0	0	0	0	0.547	0.297	0	0.369	0.781
PAK1	CDK4	1846573	1844551	ENSP00000278568	ENSP00000257904	0	0	0.334	0.72	0	0.297	0	0.372	0.419
PAK2	CDK4	1849679	1844551	ENSP00000314067	ENSP00000257904	0	0	0.324	0.721	0	0.297	0	0.372	0.417
SOS1	KRAS	1858968	1844404	ENSP00000384675	ENSP00000256078	0	0	0	0	0	0.297	0.9	0.919	0.993
SUMO1	RAD18	1857989	1845644	ENSP00000376076	ENSP00000264926	0	0	0	0	0	0.296	0	0.37	0.538
SKP2	NEDD8	1846369	1844012	ENSP00000274255	ENSP00000250495	0	0	0	0	0	0.296	0.9	0.475	0.959
EGFR	ICAM1	1846445	1845628	ENSP00000275493	ENSP00000264832	0	0	0	0	0	0.294	0	0.531	0.654
SUMO2	SMAD4	1860567	1852473	ENSP00000405965	ENSP00000341551	0	0	0	0	0	0.292	0	0.333	0.508
GRB2	SMAD3	1852164	1851536	ENSP00000339007	ENSP00000332973	0	0	0	0	0	0.291	0	0.254	0.448
SRF	SMARC B1	1845734	1845291	ENSP00000265354	ENSP00000263121	0	0	0	0	0	0.288	0	0.196	0.403
WDHD1	MCM7	1854036	1848945	ENSP00000353793	ENSP00000307288	0	0	0	0	0.43	0.287	0	0.509	0.783
CKS1B	RBX1	1849378	1842568	ENSP00000311083	ENSP00000216225	0	0	0	0	0.074	0.287	0.9	0.359	0.952
BRF1	POLR2 B	1862499	1849572	ENSP00000448323	ENSP00000312735	0	0	0	0	0	0.287	0	0.226	0.424
BRF1	POLR2 A	1862499	1849743	ENSP00000448323	ENSP00000314949	0	0	0	0	0	0.284	0	0.292	0.471
SEPTIN7	SUMO1	1858681	1857989	ENSP00000381992	ENSP00000376076	0	0	0	0	0	0.282	0	0.514	0.636
SUMO2	SEPTIN 7	1860567	1858681	ENSP00000405965	ENSP00000381992	0	0	0	0	0	0.282	0	0.308	0.482
SUMO1	ATG7	1857989	1853051	ENSP00000376076	ENSP00000346437	0	0	0	0	0	0.279	0	0.269	0.45
CREB1	UBE2I	1859295	1850693	ENSP00000387699	ENSP00000324897	0	0	0	0	0	0.279	0	0.25	0.436
MCM4	DMC1	1845065	1842529	ENSP00000262105	ENSP00000216024	0	0	0	0	0.139	0.275	0	0.222	0.471
RAD51	MCM4	1857551	1845065	ENSP00000372088	ENSP00000262105	0	0	0	0	0.139	0.275	0	0.29	0.518
PSMD4	CDC34	1854905	1842491	ENSP00000357879	ENSP00000215574	0	0	0	0	0.072	0.273	0	0.263	0.459
FBXW7	CDK4	1846740	1844551	ENSP00000281708	ENSP00000257904	0	0	0	0	0	0.272	0	0.558	0.664
JUN	CDC42	1855436	1849707	ENSP00000360266	ENSP00000314458	0	0	0	0	0	0.269	0	0.738	0.8
PCNA	CDC42	1856984	1849707	ENSP00000368438	ENSP00000314458	0	0	0	0	0	0.269	0	0.301	0.467
MTA1	HDAC3	1851603	1848477	ENSP00000333633	ENSP00000302967	0	0	0	0	0	0.269	0.36	0.611	0.802
CDC42	JUND	1849707	1844164	ENSP00000314458	ENSP00000252818	0	0	0	0	0	0.269	0	0.244	0.423
RHOA	PCNA	1860210	1856984	ENSP00000400175	ENSP00000368438	0	0	0	0	0	0.269	0	0.366	0.516
PCNA	RAC1	1856984	1853302	ENSP00000368438	ENSP00000348461	0	0	0	0	0	0.269	0	0.327	0.487
FYN	SMARC A2	1853081	1845805	ENSP00000346671	ENSP00000265773	0	0	0	0	0	0.269	0	0.235	0.417
LCK	SMARC A2	1852042	1845805	ENSP00000337825	ENSP00000265773	0	0	0	0	0	0.269	0	0.22	0.405
MET	SMARC A2	1849944	1845805	ENSP00000317272	ENSP00000265773	0	0	0	0	0	0.269	0	0.22	0.405



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SRC	SMARC A2	1853652	1845805	ENSP00000350941	ENSP00000265773	0	0	0	0	0	0.269	0	0.332	0.491
MAPK9	HDAC3	1859420	1848477	ENSP00000389338	ENSP00000302967	0	0	0	0	0	0.268	0	0.254	0.43
ARF1	ARHGD IA	1846224	1846084	ENSP00000272102	ENSP00000269321	0	0	0	0	0.072	0.263	0	0.37	0.532
JUN	CDC34	1855436	1842491	ENSP00000360266	ENSP00000215574	0	0	0	0	0	0.261	0	0.348	0.498
JUN	SKP1	1855436	1843292	ENSP00000360266	ENSP00000231487	0	0	0	0	0	0.26	0	0.461	0.584
JUND	SKP1	1844164	1843292	ENSP00000252818	ENSP00000231487	0	0	0	0	0	0.26	0	0.292	0.454
CHEK2	CDK4	1857546	1844551	ENSP00000372023	ENSP00000257904	0	0	0	0.672	0	0.26	0	0.765	0.443
CDC20	CDK4	1849070	1844551	ENSP00000308450	ENSP00000257904	0	0	0	0	0.104	0.259	0	0.709	0.79
CTNNB1	SMARC A2	1852818	1845805	ENSP00000344456	ENSP00000265773	0	0	0	0	0	0.259	0	0.488	0.604
SUMO1	SMARC A2	1857989	1845805	ENSP00000376076	ENSP00000265773	0	0	0	0	0	0.259	0	0.284	0.447
RAC1	RAF1	1853302	1844086	ENSP00000348461	ENSP00000251849	0	0	0	0	0	0.256	0	0.661	0.737
CDKN2A	PCNA	1859838	1856984	ENSP00000394932	ENSP00000368438	0	0	0	0	0	0.254	0	0.659	0.734
CDC20	FBXW7	1849070	1846740	ENSP00000308450	ENSP00000281708	0	0	0.392	0.631	0	0.252	0	0.664	0.508
RANGAP 1	NEDD8	1853317	1844012	ENSP00000348577	ENSP00000250495	0	0	0	0	0.077	0.252	0	0.653	0.739
UBA2	CDC34	1843822	1842491	ENSP00000246548	ENSP00000215574	0	0	0	0	0.094	0.251	0	0.33	0.505
SEPTIN7	PAK1	1858681	1846573	ENSP00000381992	ENSP00000278568	0	0	0	0	0	0.251	0	0.365	0.504
SEPTIN7	PAK2	1858681	1849679	ENSP00000381992	ENSP00000314067	0	0	0	0	0	0.251	0	0.365	0.504
HSP90A A1	RBX1	1851814	1842568	ENSP00000335153	ENSP00000216225	0	0	0	0	0.068	0.248	0	0.283	0.453
CALM2	ARF1	1846243	1846224	ENSP00000272298	ENSP00000272102	0	0	0	0	0.113	0.247	0	0.215	0.43
HDAC3	LEF1	1848477	1845704	ENSP00000302967	ENSP00000265165	0	0	0	0	0	0.247	0	0.672	0.743
JUN	HSP90 AA1	1855436	1851814	ENSP00000360266	ENSP00000335153	0	0	0	0	0	0.247	0	0.74	0.796
RHOA	CDC42	1860210	1849707	ENSP00000400175	ENSP00000314458	0	0	0	0.957	0.072	0.246	0.9	0.994	0.927
SRF	GAPDH	1845734	1843185	ENSP00000265354	ENSP00000229239	0	0	0	0	0	0.243	0	0.521	0.622
KRAS	JUND	1844404	1844164	ENSP00000256078	ENSP00000252818	0	0	0	0	0	0.243	0	0.631	0.709
HRAS	JUND	1849235	1844164	ENSP00000309845	ENSP00000252818	0	0	0	0	0	0.243	0	0.674	0.743
JUN	RAF1	1855436	1844086	ENSP00000360266	ENSP00000251849	0	0	0	0	0	0.243	0	0.746	0.8
JUND	RAF1	1844164	1844086	ENSP00000252818	ENSP00000251849	0	0	0	0	0	0.243	0	0.376	0.507
JUN	HRAS	1855436	1849235	ENSP00000360266	ENSP00000309845	0	0	0	0	0	0.243	0	0.837	0.872
JUN	KRAS	1855436	1844404	ENSP00000360266	ENSP00000256078	0	0	0	0	0	0.243	0	0.84	0.873
CUL4A	CDC34	1856298	1842491	ENSP00000364589	ENSP00000215574	0	0	0	0	0	0.241	0	0.482	0.59
CUL4A	UBE2I	1856298	1850693	ENSP00000364589	ENSP00000324897	0	0	0	0	0	0.241	0	0.243	0.401
RAC1	HRAS	1853302	1849235	ENSP00000348461	ENSP00000309845	0	0	0	0.728	0.076	0.241	0.9	0.742	0.938
RAC1	KRAS	1853302	1844404	ENSP00000348461	ENSP00000256078	0	0	0	0.713	0.076	0.241	0	0.707	0.414
RHOA	KRAS	1860210	1844404	ENSP00000400175	ENSP00000256078	0	0	0.303	0.783	0.065	0.241	0	0.688	0.405
RHOA	HRAS	1860210	1849235	ENSP00000400175	ENSP00000309845	0	0	0.316	0.791	0.065	0.241	0.9	0.724	0.938
JUN	POLR2 A	1855436	1849743	ENSP00000360266	ENSP00000314949	0	0	0	0	0	0.237	0.9	0.272	0.939
PCNA	CDC34	1856984	1842491	ENSP00000368438	ENSP00000215574	0	0	0	0	0.09	0.235	0	0.435	0.572

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SMAD1	SMAD7	1848770	1845078	ENSP00000305769	ENSP00000262158	0	0	0	0.646	0	0.234	0.9	0.616	0.937
CDT1	NEDD8	1848231	1844012	ENSP00000301019	ENSP00000250495	0	0	0	0	0	0.233	0	0.4	0.52
CUL1	JUND	1850867	1844164	ENSP00000326804	ENSP00000252818	0	0	0	0	0	0.231	0	0.279	0.422
JUN	CUL1	1855436	1850867	ENSP00000360266	ENSP00000326804	0	0	0	0	0	0.231	0	0.481	0.584
JUN	EGFR	1855436	1846445	ENSP00000360266	ENSP00000275493	0	0	0	0	0	0.228	0	0.955	0.964
EGFR	JUND	1846445	1844164	ENSP00000275493	ENSP00000252818	0	0	0	0	0	0.228	0	0.421	0.533
SOS1	PAK1	1858968	1846573	ENSP00000384675	ENSP00000278568	0	0	0	0	0	0.228	0.9	0.649	0.97
SOS1	PAK2	1858968	1849679	ENSP00000384675	ENSP00000314067	0	0	0	0	0	0.228	0.9	0.653	0.97
POLR2A	HDAC3	1849743	1848477	ENSP00000314949	ENSP00000302967	0	0	0	0	0.11	0.227	0	0.38	0.536
HSP90A A1	PAK1	1851814	1846573	ENSP00000335153	ENSP00000278568	0	0	0	0	0	0.227	0.9	0.141	0.927
SOS1	SRC	1858968	1853652	ENSP00000384675	ENSP00000350941	0	0	0	0	0	0.227	0.9	0.64	0.969
SUMO1	HDAC3	1857989	1848477	ENSP00000376076	ENSP00000302967	0	0	0	0	0.093	0.226	0	0.609	0.701
CBL	NEDD8	1845465	1844012	ENSP00000264033	ENSP00000250495	0	0	0	0	0	0.226	0.9	0.329	0.943
SUMO1	CENPC 1	1857989	1846338	ENSP00000376076	ENSP00000273853	0	0	0	0	0	0.226	0	0.539	0.627
GRB2	CDC42	1852164	1849707	ENSP00000339007	ENSP00000314458	0	0	0	0	0	0.224	0	0.804	0.842
CDC42	RAF1	1849707	1844086	ENSP00000314458	ENSP00000251849	0	0	0	0	0	0.224	0	0.672	0.735
SUMO1	PSMD4	1857989	1854905	ENSP00000376076	ENSP00000357879	0	0	0	0	0.079	0.224	0	0.361	0.503
MAD2L1	CDC6	1847745	1842453	ENSP00000296509	ENSP00000209728	0	0	0	0	0.23	0.223	0	0.293	0.54
SMARC A2	SRF	1845805	1845734	ENSP00000265773	ENSP00000265354	0	0	0	0	0	0.222	0	0.337	0.462
SMARC A2	GAPDH	1845805	1843185	ENSP00000265773	ENSP00000229239	0	0	0	0	0	0.22	0	0.453	0.555
CHEK2	ORC1	1857546	1855507	ENSP00000372023	ENSP00000360621	0	0	0	0	0.245	0.219	0	0.227	0.504
CDKN2A	GAPDH	1859838	1843185	ENSP00000394932	ENSP00000229239	0	0	0	0	0	0.213	0	0.633	0.698
SOS1	CDC42	1858968	1849707	ENSP00000384675	ENSP00000314458	0	0	0	0	0	0.207	0.9	0.539	0.96
SOS1	RAC1	1858968	1853302	ENSP00000384675	ENSP00000348461	0	0	0	0	0	0.207	0.9	0.576	0.963
RHOA	SOS1	1860210	1858968	ENSP00000400175	ENSP00000384675	0	0	0	0	0	0.207	0.9	0.481	0.955
CHEK2	MCM4	1857546	1845065	ENSP00000372023	ENSP00000262105	0	0	0	0	0.186	0.207	0	0.958	0.971
ORC1	DMC1	1855507	1842529	ENSP00000360621	ENSP00000216024	0	0	0	0	0.111	0.205	0	0.258	0.429
RAD51	ORC1	1857551	1855507	ENSP00000372088	ENSP00000360621	0	0	0	0	0.113	0.205	0	0.258	0.431
PSMD7	RBX1	1842741	1842568	ENSP00000219313	ENSP00000216225	0	0	0	0	0.089	0.202	0.9	0.104	0.926
PSMD14	RBX1	1859182	1842568	ENSP00000386541	ENSP00000216225	0	0	0	0	0.093	0.202	0.9	0.358	0.947
RAC1	SMAD4	1853302	1852473	ENSP00000348461	ENSP00000341551	0	0	0	0	0	0.2	0	0.407	0.505
PSMD14	JUND	1859182	1844164	ENSP00000386541	ENSP00000252818	0	0	0	0	0.072	0.196	0	0.359	0.479
MCL1	CASP8	1854935	1853692	ENSP00000358022	ENSP00000351273	0	0	0	0	0	0.195	0	0.731	0.774
MCL1	CASP9	1854935	1851230	ENSP00000358022	ENSP00000330237	0	0	0	0	0	0.195	0	0.681	0.732
SUMO1	RFC4	1857989	1847705	ENSP00000376076	ENSP00000296273	0	0	0	0	0.081	0.195	0	0.28	0.421
CDKN2A	CUL1	1859838	1850867	ENSP00000394932	ENSP00000326804	0	0	0	0	0	0.186	0	0.3	0.405
CDKN2A	FBXW7	1859838	1846740	ENSP00000394932	ENSP00000281708	0	0	0	0	0	0.184	0	0.415	0.502
RFC5	CHEK2	1860712	1857546	ENSP00000408295	ENSP00000372023	0	0	0	0	0.073	0.181	0	0.507	0.593
CHEK2	RFC4	1857546	1847705	ENSP00000372023	ENSP00000296273	0	0	0	0	0.077	0.181	0	0.448	0.546
ATG7	NEDD8	1853051	1844012	ENSP00000346437	ENSP00000250495	0	0	0	0	0	0.18	0	0.315	0.415

CDKN2A	HSP90 AA1	1859838	1851814	ENSP00000394932	ENSP00000335153	0	0	0	0	0	0.18	0	0.505	0.577
MYLK	GRB2	1853981	1852164	ENSP00000353452	ENSP00000339007	0	0	0	0	0	0.175	0	0.358	0.447
CDK4	CDC34	1844551	1842491	ENSP00000257904	ENSP00000215574	0	0	0	0	0	0.171	0	0.485	0.555
SUMO1	GAPDH	1857989	1843185	ENSP00000376076	ENSP00000229239	0	0	0	0	0.082	0.17	0	0.421	0.521
CHEK2	FEN1	1857546	1848737	ENSP00000372023	ENSP00000305480	0	0	0	0	0.09	0.165	0	0.395	0.5
SUMO2	PSMD1 3	1860567	1859976	ENSP00000405965	ENSP00000396937	0	0	0	0	0.07	0.165	0	0.368	0.467
RFC3	RPA2	1857148	1856012	ENSP00000369411	ENSP00000363021	0	0	0	0	0.433	0.16	0.9	0.093	0.951
RPA2	RFC4	1856012	1847705	ENSP00000363021	ENSP00000296273	0	0	0	0	0.362	0.16	0.9	0.277	0.956
SUMO1	NEDD8	1857989	1844012	ENSP00000376076	ENSP00000250495	0	0	0	0	0.479	0.159	0	0.821	0.914
RFC3	DMC1	1857148	1842529	ENSP00000369411	ENSP00000216024	0	0	0	0	0.114	0.156	0	0.288	0.421
RAD51	RFC3	1857551	1857148	ENSP00000372088	ENSP00000369411	0	0	0	0	0.114	0.156	0	0.398	0.511
HSP90A A1	GAPDH	1851814	1843185	ENSP00000335153	ENSP00000229239	0	0	0	0	0.106	0.155	0	0.843	0.871
CDT1	MCM3	1848231	1843226	ENSP00000301019	ENSP00000229854	0	0	0	0	0.427	0.155	0.9	0.624	0.979
CDT1	MCM2	1848231	1845676	ENSP00000301019	ENSP00000265056	0	0	0	0	0.477	0.155	0.9	0.877	0.993
CDT1	MCM5	1848231	1842548	ENSP00000301019	ENSP00000216122	0	0	0	0	0.734	0.155	0.9	0.521	0.987
BMP7	EGFR	1858342	1846445	ENSP00000379204	ENSP00000275493	0	0	0	0	0	0.151	0	0.394	0.464
JUN	FYN	1855436	1853081	ENSP00000360266	ENSP00000346671	0	0	0	0	0	0.151	0	0.61	0.655
SRC	JUND	1853652	1844164	ENSP00000350941	ENSP00000252818	0	0	0	0	0	0.151	0	0.452	0.515
JUN	SRC	1855436	1853652	ENSP00000360266	ENSP00000350941	0	0	0	0	0	0.151	0	0.964	0.969
CDK4	DMC1	1844551	1842529	ENSP00000257904	ENSP00000216024	0	0	0	0	0.074	0.15	0.9	0.146	0.923
CKS1B	NEDD8	1849378	1844012	ENSP00000311083	ENSP00000250495	0	0	0	0	0	0.15	0.9	0.146	0.921
RAD51	CDK4	1857551	1844551	ENSP00000372088	ENSP00000257904	0	0	0	0	0.074	0.15	0.9	0.283	0.936
CDC20	CDC34	1849070	1842491	ENSP00000308450	ENSP00000215574	0	0	0	0	0	0.149	0	0.524	0.577
EPHB2	CTNNB 1	1856154	1852818	ENSP00000363763	ENSP00000344456	0	0	0	0	0.069	0.149	0	0.425	0.504
RFC5	DMC1	1860712	1842529	ENSP00000408295	ENSP00000216024	0	0	0	0	0.115	0.149	0	0.288	0.416
RFC4	DMC1	1847705	1842529	ENSP00000296273	ENSP00000216024	0	0	0	0	0.162	0.149	0	0.288	0.447
MAPK8	FYN	1853988	1853081	ENSP00000353483	ENSP00000346671	0	0	0.348	0.626	0	0.149	0.9	0.839	0.946
MAPK9	FYN	1859420	1853081	ENSP00000389338	ENSP00000346671	0	0	0.352	0.624	0	0.149	0	0.807	0.477
FOS	HDAC3	1848822	1848477	ENSP00000306245	ENSP00000302967	0	0	0	0	0	0.149	0	0.776	0.802
CUL4A	JUN	1856298	1855436	ENSP00000364589	ENSP00000360266	0	0	0	0	0	0.149	0	0.443	0.506
RHOA	JUN	1860210	1855436	ENSP00000400175	ENSP00000360266	0	0	0	0	0	0.149	0	0.976	0.979
RHOA	JUND	1860210	1844164	ENSP00000400175	ENSP00000252818	0	0	0	0	0	0.149	0	0.684	0.719
CTNNB1	LCK	1852818	1852042	ENSP00000344456	ENSP00000337825	0	0	0	0	0	0.149	0	0.331	0.407
CHEK2	MCM3	1857546	1843226	ENSP00000372023	ENSP00000229854	0	0	0	0	0.136	0.149	0	0.952	0.961
CHEK2	MCM7	1857546	1848945	ENSP00000372023	ENSP00000307288	0	0	0	0	0.18	0.149	0	0.542	0.652
RFC5	ORC1	1860712	1855507	ENSP00000408295	ENSP00000360621	0	0	0	0	0.112	0.149	0	0.31	0.433
RFC3	ORC1	1857148	1855507	ENSP00000369411	ENSP00000360621	0	0	0	0	0.283	0.149	0	0.331	0.556
RFC5	RAD51	1860712	1857551	ENSP00000408295	ENSP00000372088	0	0	0	0	0.115	0.149	0	0.414	0.52
SRC	SKP2	1853652	1846369	ENSP00000350941	ENSP00000274255	0	0	0	0	0	0.149	0	0.324	0.4
MAPK9	SRC	1859420	1853652	ENSP00000389338	ENSP00000350941	0	0	0.357	0.625	0	0.149	0	0.877	0.498

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MAPK8	SRC	1853988	1853652	ENSP00000353483	ENSP00000350941	0	0	0.361	0.627	0	0.149	0.9	0.911	0.948
EGFR	SRF	1846445	1845734	ENSP00000275493	ENSP00000265354	0	0	0	0	0	0.149	0	0.434	0.498
ATG5	UBA2	1852683	1843822	ENSP00000343313	ENSP00000246548	0	0	0	0	0	0.149	0	0.358	0.43
BARD1	CDK4	1844829	1844551	ENSP00000260947	ENSP00000257904	0	0	0	0	0	0.149	0	0.482	0.541
CDKN2A	SMARCA2	1859838	1845805	ENSP00000394932	ENSP00000265773	0	0	0	0	0	0.149	0	0.364	0.436
CHEK2	MCM6	1857546	1845487	ENSP00000372023	ENSP00000264156	0	0	0	0	0.156	0.149	0	0.332	0.478
FBXW7	NEDD8	1846740	1844012	ENSP00000281708	ENSP00000250495	0	0	0	0	0	0.149	0	0.673	0.71
ORC1	RFC4	1855507	1847705	ENSP00000360621	ENSP00000296273	0	0	0	0	0.181	0.149	0	0.373	0.525
RAD51	RFC4	1857551	1847705	ENSP00000372088	ENSP00000296273	0	0	0	0	0.162	0.149	0	0.446	0.57
RHOA	MAPK9	1860210	1859420	ENSP00000400175	ENSP00000389338	0	0	0	0	0	0.149	0	0.704	0.737
CASP8	BIRC3	1853692	1845359	ENSP00000351273	ENSP00000263464	0	0	0	0	0	0.148	0.9	0.736	0.975
CASP8	BIRC5	1853692	1848314	ENSP00000351273	ENSP00000301633	0	0	0	0	0	0.148	0	0.672	0.708
FEN1	DDB1	1848737	1848334	ENSP00000305480	ENSP00000301764	0	0	0	0	0	0.148	0	0.356	0.428
MCM7	CDK4	1848945	1844551	ENSP00000307288	ENSP00000257904	0	0	0	0	0.228	0.144	0	0.647	0.746
UBA2	SKP1	1843822	1843292	ENSP00000246548	ENSP00000231487	0	0	0	0	0.09	0.143	0	0.364	0.461
RFC4	RAD18	1847705	1845644	ENSP00000296273	ENSP00000264926	0	0	0	0	0	0.14	0	0.359	0.425
RFC5	RAD18	1860712	1845644	ENSP00000408295	ENSP00000264926	0	0	0	0	0	0.14	0	0.413	0.474
BARD1	RBX1	1844829	1842568	ENSP00000260947	ENSP00000216225	0	0	0	0	0	0.14	0.9	0.272	0.931
NOS2	ICAM1	1850906	1845628	ENSP00000327251	ENSP00000264832	0	0	0	0	0	0.136	0	0.399	0.458
NOS2	SERPINE1	1850906	1842959	ENSP00000327251	ENSP00000223095	0	0	0	0	0	0.136	0	0.597	0.637
MCM7	MAD2L1	1848945	1847745	ENSP00000307288	ENSP00000296509	0	0	0	0	0.466	0.133	0	0.362	0.678
MAD2L1	MCM2	1847745	1845676	ENSP00000296509	ENSP00000265056	0	0	0	0	0.252	0.133	0	0.3	0.506
MAD2L1	MCM5	1847745	1842548	ENSP00000296509	ENSP00000216122	0	0	0	0	0.524	0.133	0	0.357	0.711
MAD2L1	MCM6	1847745	1845487	ENSP00000296509	ENSP00000264156	0	0	0	0	0.167	0.133	0	0.265	0.422
MAD2L1	MCM4	1847745	1845065	ENSP00000296509	ENSP00000262105	0	0	0	0	0.224	0.133	0	0.361	0.533
SUMO1	SMAD3	1857989	1851536	ENSP00000376076	ENSP00000332973	0	0	0	0	0	0.132	0	0.849	0.863
CDC42	EGFR	1849707	1846445	ENSP00000314458	ENSP00000275493	0	0	0	0	0	0.125	0.9	0.624	0.964
RAC1	EGFR	1853302	1846445	ENSP00000348461	ENSP00000275493	0	0	0	0	0	0.125	0.9	0.667	0.968
RHOA	EGFR	1860210	1846445	ENSP00000400175	ENSP00000275493	0	0	0	0	0	0.125	0.9	0.69	0.97
CREB1	JUND	1859295	1844164	ENSP00000387699	ENSP00000252818	0	0	0	0	0	0.123	0	0.794	0.812
EPHB2	PAK1	1856154	1846573	ENSP00000363763	ENSP00000278568	0	0	0	0.619	0	0.123	0.9	0.157	0.912
FYN	PAK1	1853081	1846573	ENSP00000346671	ENSP00000278568	0	0	0.362	0.624	0	0.123	0.9	0.285	0.927
LCK	PAK1	1852042	1846573	ENSP00000337825	ENSP00000278568	0	0	0.362	0.629	0	0.123	0.9	0.273	0.927
SRC	PAK1	1853652	1846573	ENSP00000350941	ENSP00000278568	0	0	0.382	0.626	0	0.123	0.9	0.885	0.946
CHEK2	BARD1	1857546	1844829	ENSP00000372023	ENSP00000260947	0	0	0	0	0	0.119	0	0.599	0.631
CDKN2A	CHEK2	1859838	1857546	ENSP00000394932	ENSP00000372023	0	0	0	0	0	0.119	0	0.607	0.639
BMP7	SMAD4	1858342	1852473	ENSP00000379204	ENSP00000341551	0	0	0	0	0	0.119	0	0.854	0.866
BMP7	SMAD7	1858342	1845078	ENSP00000379204	ENSP00000262158	0	0	0	0	0	0.119	0	0.939	0.945
SRC	ARF1	1853652	1846224	ENSP00000350941	ENSP00000272102	0	0	0	0	0.109	0.113	0	0.446	0.524
EPHB2	CDC42	1856154	1849707	ENSP00000363763	ENSP00000314458	0	0	0	0	0	0.113	0.9	0.444	0.946
FYN	CDC42	1853081	1849707	ENSP00000346671	ENSP00000314458	0	0	0	0	0	0.113	0.9	0.874	0.987

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MET	CDC42	1849944	1849707	ENSP00000317272	ENSP00000314458	0	0	0	0	0	0.113	0.9	0.467	0.948
SRC	CDC42	1853652	1849707	ENSP00000350941	ENSP00000314458	0	0	0	0	0	0.113	0.9	0.986	0.998
RHOA	EPHB2	1860210	1856154	ENSP00000400175	ENSP00000363763	0	0	0	0	0	0.113	0	0.421	0.464
RAC1	FYN	1853302	1853081	ENSP00000348461	ENSP00000346671	0	0	0	0	0	0.113	0.9	0.742	0.975
RHOA	FYN	1860210	1853081	ENSP00000400175	ENSP00000346671	0	0	0	0	0.112	0.113	0.9	0.858	0.987
RAC1	LCK	1853302	1852042	ENSP00000348461	ENSP00000337825	0	0	0	0	0.079	0.113	0.9	0.564	0.959
RHOA	LCK	1860210	1852042	ENSP00000400175	ENSP00000337825	0	0	0	0	0	0.113	0.9	0.45	0.947
RFC3	MAD2L1	1857148	1847745	ENSP00000369411	ENSP00000296509	0	0	0	0	0.226	0.113	0	0.214	0.413
RAC1	MET	1853302	1849944	ENSP00000348461	ENSP00000317272	0	0	0	0	0	0.113	0.9	0.538	0.955
RHOA	MET	1860210	1849944	ENSP00000400175	ENSP00000317272	0	0	0	0	0	0.113	0.9	0.461	0.948
EPHB2	RAC1	1856154	1853302	ENSP00000363763	ENSP00000348461	0	0	0	0	0	0.113	0.9	0.445	0.946
SRC	RAC1	1853652	1853302	ENSP00000350941	ENSP00000348461	0	0	0	0	0	0.113	0.9	0.989	0.999
RHOA	SRC	1860210	1853652	ENSP00000400175	ENSP00000350941	0	0	0	0	0.112	0.113	0.9	0.986	0.998
EPHB2	HRAS	1856154	1849235	ENSP00000363763	ENSP00000309845	0	0	0	0	0	0.113	0.9	0.287	0.931
LCK	HRAS	1852042	1849235	ENSP00000337825	ENSP00000309845	0	0	0	0	0	0.113	0.9	0.446	0.946
LCK	KRAS	1852042	1844404	ENSP00000337825	ENSP00000256078	0	0	0	0	0	0.113	0.9	0.428	0.944
MAD2L1	RFC4	1847745	1847705	ENSP00000296509	ENSP00000296273	0	0	0	0	0.157	0.113	0	0.263	0.4
MET	HRAS	1849944	1849235	ENSP00000317272	ENSP00000309845	0	0	0	0	0	0.113	0.9	0.656	0.966
MET	KRAS	1849944	1844404	ENSP00000317272	ENSP00000256078	0	0	0	0	0	0.113	0	0.655	0.681
RHOA	RAF1	1860210	1844086	ENSP00000400175	ENSP00000251849	0	0	0	0	0	0.111	0.8	0.71	0.944
CREB1	FOS	1859295	1848822	ENSP00000387699	ENSP00000306245	0	0	0	0	0	0.11	0.9	0.994	0.999
CDKN2A	MET	1859838	1849944	ENSP00000394932	ENSP00000317272	0	0	0	0	0	0.11	0	0.472	0.509
CDKN2A	SRC	1859838	1853652	ENSP00000394932	ENSP00000350941	0	0	0	0	0	0.11	0	0.508	0.543
ING4	WDR5	1858422	1853715	ENSP00000380024	ENSP00000351446	0	0	0	0	0	0.11	0	0.574	0.605
LEF1	AXIN1	1845704	1845118	ENSP00000265165	ENSP00000262320	0	0	0	0	0	0.11	0	0.773	0.789
PCNA	HRAS	1856984	1849235	ENSP00000368438	ENSP00000309845	0	0	0	0	0	0.11	0	0.571	0.602
PCNA	KRAS	1856984	1844404	ENSP00000368438	ENSP00000256078	0	0	0	0	0	0.11	0	0.542	0.575
MEF2A	GAPDH	1853046	1843185	ENSP00000346389	ENSP00000229239	0	0	0	0	0	0.109	0	0.533	0.566
RAD51	GAPDH	1857551	1843185	ENSP00000372088	ENSP00000229239	0.068	0	0	0	0	0.109	0	0.434	0.489
CDK4	MEF2B	1844551	1842283	ENSP00000257904	ENSP00000162023	0	0	0	0	0	0.109	0	0.433	0.474
MEF2A	CDK4	1853046	1844551	ENSP00000346389	ENSP00000257904	0	0	0	0	0	0.109	0	0.544	0.577
RAD51	POLR2A	1857551	1849743	ENSP00000372088	ENSP00000314949	0	0	0	0	0	0.109	0	0.359	0.405
NOS2	CALM2	1850906	1846243	ENSP00000327251	ENSP00000272298	0	0	0	0	0	0.108	0	0.86	0.87
FYN	DMC1	1853081	1842529	ENSP00000346671	ENSP00000216024	0	0	0	0	0	0.107	0	0.489	0.524
SRC	DMC1	1853652	1842529	ENSP00000350941	ENSP00000216024	0	0	0	0	0	0.107	0	0.489	0.524
RAD51	FYN	1857551	1853081	ENSP00000372088	ENSP00000346671	0	0	0	0	0	0.107	0	0.489	0.524
MAPK9	LCK	1859420	1852042	ENSP00000389338	ENSP00000337825	0	0	0.349	0.627	0	0.107	0.9	0.639	0.937
MAPK8	LCK	1853988	1852042	ENSP00000353483	ENSP00000337825	0	0	0.345	0.629	0	0.107	0.9	0.694	0.938
MAPK8	MET	1853988	1849944	ENSP00000353483	ENSP00000317272	0	0	0	0	0	0.107	0.9	0.383	0.94
RAD51	SRC	1857551	1853652	ENSP00000372088	ENSP00000350941	0	0	0	0	0	0.107	0	0.595	0.623
FOS	SMARCA2	1848822	1845805	ENSP00000306245	ENSP00000265773	0	0	0	0	0	0.107	0	0.478	0.514

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MAD2L1	PSMD7	1847745	1842741	ENSP00000296509	ENSP00000219313	0	0	0	0	0	0.107	0.9	0.06	0.908
SRC	CDK4	1853652	1844551	ENSP00000350941	ENSP00000257904	0	0	0.371	0.644	0	0.107	0	0.925	0.473
CUL1	EP300	1850867	1845316	ENSP00000326804	ENSP00000263253	0	0	0	0	0	0.106	0.9	0.259	0.928
RAD51	CDC6	1857551	1842453	ENSP00000372088	ENSP00000209728	0	0	0	0	0.133	0.106	0	0.476	0.559
JUN	CTNNB1	1855436	1852818	ENSP00000360266	ENSP00000344456	0	0	0	0	0	0.105	0.9	0.918	0.992
EP300	SKP1	1845316	1843292	ENSP00000263253	ENSP00000231487	0	0	0	0	0	0.105	0.9	0.25	0.927
CDC42	CDK4	1849707	1844551	ENSP00000314458	ENSP00000257904	0	0	0	0	0	0.105	0	0.463	0.499
RAC1	CDK4	1853302	1844551	ENSP00000348461	ENSP00000257904	0	0	0	0	0	0.105	0	0.463	0.499
RHOA	CDK4	1860210	1844551	ENSP00000400175	ENSP00000257904	0	0	0	0	0	0.105	0	0.508	0.541
MET	FOS	1849944	1848822	ENSP00000317272	ENSP00000306245	0	0	0	0	0	0.104	0	0.459	0.494
ORC1	PSMC4	1855507	1842267	ENSP00000360621	ENSP00000157812	0	0	0	0	0	0.104	0.9	0.078	0.91
ORC1	PSMC1	1855507	1844882	ENSP00000360621	ENSP00000261303	0	0	0	0	0	0.104	0.9	0.078	0.91
MCM7	BIRC5	1848945	1848314	ENSP00000307288	ENSP00000301633	0	0	0	0	0.157	0.102	0	0.306	0.428
RAC1	CTNNB1	1853302	1852818	ENSP00000348461	ENSP00000344456	0	0	0	0	0	0.102	0.9	0.917	0.991
BIRC5	MCM3	1848314	1843226	ENSP00000301633	ENSP00000229854	0	0	0	0	0.261	0.102	0	0.286	0.484
RFC5	MCM3	1860712	1843226	ENSP00000408295	ENSP00000229854	0.089	0	0	0	0.228	0.102	0	0.346	0.532
RFC5	MCM7	1860712	1848945	ENSP00000408295	ENSP00000307288	0.089	0	0	0	0.266	0.102	0.9	0.488	0.963
RFC3	MCM7	1857148	1848945	ENSP00000369411	ENSP00000307288	0.089	0	0	0	0.517	0.102	0.9	0.496	0.976
BIRC5	MCM5	1848314	1842548	ENSP00000301633	ENSP00000216122	0	0	0	0	0.435	0.102	0	0.33	0.63
HDAC3	CDK4	1848477	1844551	ENSP00000302967	ENSP00000257904	0	0	0	0	0	0.102	0.9	0.396	0.941
MCM7	RFC4	1848945	1847705	ENSP00000307288	ENSP00000296273	0.089	0	0	0	0.424	0.102	0.9	0.558	0.975
PAK2	PSMC1	1849679	1844882	ENSP00000314067	ENSP00000261303	0	0	0	0	0	0.102	0.9	0	0.906
PAK2	PSMC4	1849679	1842267	ENSP00000314067	ENSP00000157812	0	0	0	0	0	0.102	0.9	0	0.906
SRF	CDK4	1845734	1844551	ENSP00000265354	ENSP00000257904	0	0	0	0	0	0.102	0	0.387	0.426
PSMD4	CDC20	1854905	1849070	ENSP00000357879	ENSP00000308450	0	0	0	0	0	0.101	0.9	0.101	0.912
FYN	EGFR	1853081	1846445	ENSP00000346671	ENSP00000275493	0	0	0	0.708	0	0.101	0.9	0.975	0.932
LCK	EGFR	1852042	1846445	ENSP00000337825	ENSP00000275493	0	0	0	0.713	0	0.101	0.9	0.748	0.926
JUN	LCK	1855436	1852042	ENSP00000360266	ENSP00000337825	0	0	0	0	0	0.101	0	0.619	0.643
FOS	SERPINE1	1848822	1842959	ENSP00000306245	ENSP00000223095	0	0	0	0	0	0.1	0	0.562	0.589
CDKN2A	EGFR	1859838	1846445	ENSP00000394932	ENSP00000275493	0	0	0	0	0	0.099	0	0.715	0.733
EP300	CDK4	1845316	1844551	ENSP00000263253	ENSP00000257904	0	0	0	0	0	0.099	0.9	0.693	0.969
PSMD14	ATG7	1859182	1853051	ENSP00000386541	ENSP00000346437	0.462	0	0	0	0	0.098	0	0.161	0.557
HRAS	EP300	1849235	1845316	ENSP00000309845	ENSP00000263253	0	0	0	0	0	0.098	0	0.426	0.46
MEF2A	FOS	1853046	1848822	ENSP00000346389	ENSP00000306245	0	0	0	0	0	0.098	0	0.573	0.598
FOS	SRF	1848822	1845734	ENSP00000306245	ENSP00000265354	0	0	0	0	0	0.098	0.9	0.986	0.998
ATG7	PSMD7	1853051	1842741	ENSP00000346437	ENSP00000219313	0.462	0	0	0	0	0.098	0	0.156	0.554
EP300	KRAS	1845316	1844404	ENSP00000263253	ENSP00000256078	0	0	0	0	0	0.098	0	0.38	0.417
SKP2	CDK4	1846369	1844551	ENSP00000274255	ENSP00000257904	0	0	0	0	0.103	0.098	0.9	0.711	0.973
MCL1	BIRC2	1854935	1843127	ENSP00000358022	ENSP00000227758	0	0	0	0	0	0.097	0	0.664	0.684
MCL1	BIRC3	1854935	1845359	ENSP00000358022	ENSP00000263464	0	0	0	0	0	0.097	0	0.711	0.728
MCL1	BIRC5	1854935	1848314	ENSP00000358022	ENSP00000301633	0	0	0	0	0	0.097	0	0.803	0.815

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PSMD14	MAD2L1	1859182	1847745	ENSP00000386541	ENSP00000296509	0	0	0	0	0	0.097	0.9	0	0.905
RAD51	MCM3	1857551	1843226	ENSP00000372088	ENSP00000229854	0	0	0	0	0.179	0.097	0	0.299	0.435
RAD51	MCM2	1857551	1845676	ENSP00000372088	ENSP00000265056	0	0	0	0	0.142	0.097	0	0.363	0.463
RAD51	MCM5	1857551	1842548	ENSP00000372088	ENSP00000216122	0	0	0	0	0.225	0.097	0	0.224	0.409
FYN	CALM2	1853081	1846243	ENSP00000346671	ENSP00000272298	0	0	0	0	0	0.096	0	0.397	0.432
HDAC3	CALM2	1848477	1846243	ENSP00000302967	ENSP00000272298	0	0	0	0	0.069	0.096	0.9	0.18	0.921
LCK	CALM2	1852042	1846243	ENSP00000337825	ENSP00000272298	0	0	0	0	0	0.096	0	0.522	0.55
SRC	CALM2	1853652	1846243	ENSP00000350941	ENSP00000272298	0	0	0	0	0	0.096	0	0.433	0.465
CALM1	HDAC3	1853445	1848477	ENSP00000349467	ENSP00000302967	0	0	0	0	0.069	0.096	0.9	0.18	0.921
FEN1	MCM3	1848737	1843226	ENSP00000305480	ENSP00000229854	0	0	0	0	0.566	0.096	0	0.378	0.734
MCM7	FEN1	1848945	1848737	ENSP00000307288	ENSP00000305480	0	0	0	0	0.256	0.096	0	0.425	0.579
RPA2	ATRIP	1856012	1850516	ENSP00000363021	ENSP00000323099	0	0	0	0	0	0.095	0.9	0.722	0.972
SEPTIN7	CDC42	1858681	1849707	ENSP00000381992	ENSP00000314458	0	0	0	0	0	0.095	0	0.676	0.694
RPA2	DDB1	1856012	1848334	ENSP00000363021	ENSP00000301764	0	0	0	0	0	0.095	0.9	0.283	0.929
APEX1	DMC1	1842615	1842529	ENSP00000216714	ENSP00000216024	0	0	0	0	0.133	0.095	0	0.325	0.424
SEPTIN7	RAC1	1858681	1853302	ENSP00000381992	ENSP00000348461	0	0	0	0	0	0.095	0	0.489	0.518
DDB1	RPA1	1848334	1844316	ENSP00000301764	ENSP00000254719	0	0	0	0	0	0.095	0.9	0.182	0.919
RAD51	APEX1	1857551	1842615	ENSP00000372088	ENSP00000216714	0	0	0	0	0.133	0.095	0	0.532	0.6
PCNA	CUL1	1856984	1850867	ENSP00000368438	ENSP00000326804	0	0	0	0	0	0.094	0	0.388	0.422
BMP7	CTNNB1	1858342	1852818	ENSP00000379204	ENSP00000344456	0	0	0	0	0	0.093	0	0.567	0.591
CHEK2	EP300	1857546	1845316	ENSP00000372023	ENSP00000263253	0	0	0	0	0	0.093	0	0.502	0.529
RHOA	CALM2	1860210	1846243	ENSP00000400175	ENSP00000272298	0	0	0	0	0.112	0.092	0	0.453	0.52
SRF	EP300	1845734	1845316	ENSP00000265354	ENSP00000263253	0	0	0	0	0	0.092	0	0.545	0.57
SMARCB1	RBL2	1845291	1845071	ENSP00000263121	ENSP00000262133	0	0	0	0	0.128	0.092	0	0.695	0.738
CALM1	HRAS	1853445	1849235	ENSP00000349467	ENSP00000309845	0	0	0	0	0	0.092	0.8	0.22	0.846
ICAM1	EP300	1845628	1845316	ENSP00000264832	ENSP00000263253	0	0	0	0	0	0.09	0	0.414	0.443
HDAC3	SMARCC1	1848477	1844297	ENSP00000302967	ENSP00000254480	0	0	0	0	0.079	0.088	0	0.52	0.562
CDKN2A	ARF1	1859838	1846224	ENSP00000394932	ENSP00000272102	0	0	0	0	0	0.086	0	0.695	0.709
CDKN2A	CDC42	1859838	1849707	ENSP00000394932	ENSP00000314458	0	0	0	0	0	0.086	0	0.431	0.458
RHOA	CDKN2A	1860210	1859838	ENSP00000400175	ENSP00000394932	0	0	0	0	0	0.086	0	0.43	0.457
CDKN2A	RAC1	1859838	1853302	ENSP00000394932	ENSP00000348461	0	0	0	0	0	0.086	0	0.419	0.446
CDKN2A	KRAS	1859838	1844404	ENSP00000394932	ENSP00000256078	0	0	0	0	0	0.086	0	0.818	0.826
CDKN2A	HRAS	1859838	1849235	ENSP00000394932	ENSP00000309845	0	0	0	0	0	0.086	0	0.82	0.828
SOS1	RAF1	1858968	1844086	ENSP00000384675	ENSP00000251849	0	0	0	0	0	0.084	0	0.889	0.894
FYN	FOS	1853081	1848822	ENSP00000346671	ENSP00000306245	0	0	0	0	0	0.083	0	0.95	0.953
LCK	FOS	1852042	1848822	ENSP00000337825	ENSP00000306245	0	0	0	0	0	0.083	0	0.596	0.614
SRC	FOS	1853652	1848822	ENSP00000350941	ENSP00000306245	0	0	0	0	0	0.083	0	0.979	0.979
SOD1	GAPDH	1846132	1843185	ENSP00000270142	ENSP00000229239	0	0	0	0	0.112	0.083	0	0.387	0.457
POLR2B	GAPDH	1849572	1843185	ENSP00000312735	ENSP00000229239	0	0	0	0	0.074	0.083	0	0.39	0.436

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GRB2	KRAS	1852164	1844404	ENSP00000339007	ENSP00000256078	0	0	0	0	0.115	0.083	0.9	0.777	0.979
MBP	RAF1	1857547	1844086	ENSP00000372025	ENSP00000251849	0	0	0	0	0	0.082	0	0.703	0.715
BRF1	SUPT5 H	1862499	1860450	ENSP00000448323	ENSP00000404029	0	0	0	0	0	0.082	0	0.449	0.472
CDKN2A	MCM7	1859838	1848945	ENSP00000394932	ENSP00000307288	0	0	0	0	0	0.081	0	0.421	0.445
EPHB2	FYN	1856154	1853081	ENSP00000363763	ENSP00000346671	0	0	0	0.78	0.112	0.08	0.9	0.467	0.919
ATG7	GAPDH	1853051	1843185	ENSP00000346437	ENSP00000229239	0	0	0	0	0	0.08	0	0.504	0.524
HRAS	RBL2	1849235	1845071	ENSP00000309845	ENSP00000262133	0	0	0	0	0	0.08	0	0.515	0.535
RBL2	KRAS	1845071	1844404	ENSP00000262133	ENSP00000256078	0	0	0	0	0	0.08	0	0.45	0.473
LCK	LEF1	1852042	1845704	ENSP00000337825	ENSP00000265165	0	0	0	0	0.066	0.078	0	0.398	0.436
SRC	LEF1	1853652	1845704	ENSP00000350941	ENSP00000265165	0	0	0	0	0	0.078	0	0.453	0.474
CTNNB1	CDC42	1852818	1849707	ENSP00000344456	ENSP00000314458	0	0	0	0	0	0.077	0.9	0.627	0.962
SRC	POLR2 A	1853652	1849743	ENSP00000350941	ENSP00000314949	0	0	0	0	0	0.077	0	0.502	0.522
RPA2	FEN1	1856012	1848737	ENSP00000363021	ENSP00000305480	0	0	0	0	0.467	0.075	0.9	0.401	0.966
RFC4	BARD1	1847705	1844829	ENSP00000296273	ENSP00000260947	0.227	0	0	0	0	0.074	0	0.239	0.407
PTPRJ	FYN	1860195	1853081	ENSP00000400010	ENSP00000346671	0	0	0	0	0	0.074	0	0.394	0.415
HBS1L	GAPDH	1854670	1843185	ENSP00000356811	ENSP00000229239	0	0	0	0	0.101	0.074	0	0.371	0.431
SRC	SERPI NE1	1853652	1842959	ENSP00000350941	ENSP00000223095	0	0	0	0	0	0.074	0	0.5	0.517
PTPRJ	SRC	1860195	1853652	ENSP00000400010	ENSP00000350941	0	0	0	0	0	0.074	0.9	0.534	0.953
JUN	APEX1	1855436	1842615	ENSP00000360266	ENSP00000216714	0	0	0	0	0	0.074	0	0.5	0.517
BRF1	SMARC A2	1862499	1845805	ENSP00000448323	ENSP00000265773	0	0	0	0	0	0.073	0	0.393	0.413
CDKN2A	SMARC B1	1859838	1845291	ENSP00000394932	ENSP00000263121	0	0	0	0	0	0.073	0	0.876	0.88
POLR2A	GAPDH	1849743	1843185	ENSP00000314949	ENSP00000229239	0	0	0	0	0	0.071	0	0.608	0.62
PSMD13	PAK2	1859976	1849679	ENSP00000396937	ENSP00000314067	0	0	0	0	0	0.071	0.9	0.071	0.906
PAK2	PSMD8	1849679	1842478	ENSP00000314067	ENSP00000215071	0	0	0	0	0	0.068	0.9	0	0.902
HSP90A A1	BARD1	1851814	1844829	ENSP00000335153	ENSP00000260947	0	0	0	0	0	0.064	0	0.417	0.431
SRC	MEF2A	1853652	1853046	ENSP00000350941	ENSP00000346389	0	0	0	0	0	0.064	0	0.403	0.417



## APPENDIX 2 – TEST DATA: HOST GENE-VIRUS INTERACTIONS

Gene	Virus	vid	Paper Count	Z	Z
MAX	vaccinia virus	VV	93	-0.12	0.12
GCA	vaccinia virus	VV	78	-0.1	0.1
MYD88	vaccinia virus	VV	78	-0.35	0.35
IRF1	vaccinia virus	VV	69	-3.06	3.06
JUNB	vaccinia virus	VV	69	0.54	0.54
MX1	influenza A virus	FLUAV	64	-2.91	2.91
IFITM3	influenza A virus	FLUAV	61	-4.02	4.02
STAT2	respiratory syncytial virus	RSV	51	-1.31	1.31
IRF7	vaccinia virus	VV	47	-0.53	0.53
TLR3	influenza A virus	FLUAV	47	-0.41	0.41
TLR7	influenza A virus	FLUAV	45		
MYD88	influenza A virus	FLUAV	42	0.28	0.28
GCA	influenza A virus	FLUAV	39	-1.04	1.04
BCL3	vaccinia virus	VV	36	-0.51	0.51
MAX	influenza A virus	FLUAV	35	-0.75	0.75
TLR3	respiratory syncytial virus	RSV	35	0.2	0.2
STAT2	measles virus	MV	33	-2.32	2.32
TLR3	vaccinia virus	VV	31	0.61	0.61
IRF7	influenza A virus	FLUAV	29	-1.25	1.25
MYD88	respiratory syncytial virus	RSV	29	-1.11	1.11
TRIM25	influenza A virus	FLUAV	27	-1.67	1.67
IFIT1	influenza A virus	FLUAV	24	0.71	0.71
TLR7	vaccinia virus	VV	23		
IFIT2	influenza A virus	FLUAV	22	-1.2	1.2
STAT2	influenza A virus	FLUAV	22	-1.36	1.36
TLR7	respiratory syncytial virus	RSV	22		
MAX	respiratory syncytial virus	RSV	21	0.76	0.76
STAT2	human parainfluenza virus type 3	PIV3	21	-0.37	0.37
GCA	Newcastle disease virus	NDV	19	1.97	1.97
OASL	respiratory syncytial virus	RSV	19	0.97	0.97
TLR7	poliovirus	PV	19		
MX1	respiratory syncytial virus	RSV	18	1.19	1.19
SOCS1	respiratory syncytial virus	RSV	18	-0.95	0.95
IFITM2	influenza A virus	FLUAV	17	-3.27	3.27
OAS1	influenza A virus	FLUAV	17	-0.81	0.81
OASL	influenza A virus	FLUAV	17	-0.8	0.8
ETV6	influenza A virus	FLUAV	16	2.11	2.11
cGAS	vaccinia virus	VV	15	-0.08	0.08
DDX58	influenza A virus	FLUAV	15	-0.86	0.86
GCA	measles virus	MV	15	-0.78	0.78
IFIT1	respiratory syncytial virus	RSV	15	0.04	0.04
MYD88	human metapneumovirus	HMPV	15	0.32	0.32
SOCS1	influenza A virus	FLUAV	15	2.17	2.17
STAT2	vaccinia virus	VV	15	-0.13	0.13
ADAR	measles virus	MV	14	-2.02	2.02
GBP1	influenza A virus	FLUAV	14	0.88	0.88
GCA	respiratory syncytial virus	RSV	14	0.72	0.72
INDO	influenza A virus	FLUAV	14	0.4	0.4
OAS1	respiratory syncytial virus	RSV	14	1.47	1.47
OAS2	respiratory syncytial virus	RSV	14	1.06	1.06
ADM	influenza A virus	FLUAV	13	-0.12	0.12
DDX58	respiratory syncytial virus	RSV	13	1.66	1.66
MAX	measles virus	MV	13	0.28	0.28
MYD88	measles virus	MV	13	0.22	0.22
OAS2	influenza A virus	FLUAV	13	-0.19	0.19

IFIT5	influenza A virus	FLUAV	12	0.37	0.37
INDO	respiratory syncytial virus	RSV	12	0.39	0.39
LY6E	influenza A virus	FLUAV	12	2.2	2.2
IFI6	influenza A virus	FLUAV	11	-0.41	0.41
IFI6	respiratory syncytial virus	RSV	11	-0.79	0.79
IFIT2	respiratory syncytial virus	RSV	11	-1.26	1.26
IRF1	influenza A virus	FLUAV	11	-3.55	3.55
MAX	human parainfluenza virus type 3	PIV3	11	1.64	1.64
MAX	human metapneumovirus	HMPV	11	-0.33	0.33
MX1	vaccinia virus	VV	11	0.75	0.75
ATF3	respiratory syncytial virus	RSV	10	-2	2
GCA	poliovirus	PV	10	0.17	0.17
ISG20	influenza A virus	FLUAV	10	-0.18	0.18
LY6E	respiratory syncytial virus	RSV	10	-0.06	0.06
TLR7	measles virus	MV	10	0.26	0.26
ZBP1	vaccinia virus	VV	10	-5.8	5.8
ADAR	influenza A virus	FLUAV	9	-1.42	1.42
ETV7	influenza A virus	FLUAV	9	2.18	2.18
ETV7	respiratory syncytial virus	RSV	9	-0.72	0.72
GBP1	respiratory syncytial virus	RSV	9	-1.13	1.13
IFIT5	respiratory syncytial virus	RSV	9	-1.07	1.07
IRF9	influenza A virus	FLUAV	9	0.14	0.14
MAX	poliovirus	PV	9	0.15	0.15
RTP4	respiratory syncytial virus	RSV	9	2.01	2.01
SOCS1	vaccinia virus	VV	9	-0.07	0.07
TLR7	human parainfluenza virus type 3	PIV3	9		
ATF3	influenza A virus	FLUAV	8	-0.47	0.47
IRF7	human metapneumovirus	HMPV	8	-1.13	1.13
MAFB	human parainfluenza virus type 3	PIV3	8	1.55	1.55
MAX	Newcastle disease virus	NDV	8	2.1	2.1
MX1	measles virus	MV	8	-0.76	0.76
RTP4	influenza A virus	FLUAV	8		
STAT2	human metapneumovirus	HMPV	8	-1.3	1.3
TLR3	poliovirus	PV	8	-2.3	2.3
B4GALT5	human parainfluenza virus type 3	PIV3	7	-2	2
DDX58	measles virus	MV	7	3.12	3.12
GALNT2	human parainfluenza virus type 3	PIV3	7	-1.42	1.42
GZMB	influenza A virus	FLUAV	7	1.94	1.94
IFIT1	vaccinia virus	VV	7		
IRF1	respiratory syncytial virus	RSV	7	-0.94	0.94
MAX	coxsackie B virus	CVB	7	-0.37	0.37
MYD88	human parainfluenza virus type 3	PIV3	7	-1.58	1.58
ADAR	vaccinia virus	VV	6	1.04	1.04
ATF3	human parainfluenza virus type 3	PIV3	6	-1.29	1.29
CDKN1A	human parainfluenza virus type 3	PIV3	6	-0.87	0.87
CDKN1A	measles virus	MV	6		
ETV6	respiratory syncytial virus	RSV	6	-0.93	0.93
GZMB	respiratory syncytial virus	RSV	6	1.89	1.89
IRF7	respiratory syncytial virus	RSV	6	-2.07	2.07
JUNB	human parainfluenza virus type 3	PIV3	6	1.06	1.06
JUNB	measles virus	MV	6		
LEPR	influenza A virus	FLUAV	6	-1.77	1.77
LY6E	vaccinia virus	VV	6	-0.21	0.21
MAFB	measles virus	MV	6	1.88	1.88
MAP3K14	respiratory syncytial virus	RSV	6	-2.4	2.4
MYD88	poliovirus	PV	6	-0.35	0.35
OASL	vaccinia virus	VV	6	-0.09	0.09
TLR3	measles virus	MV	6	-0.05	0.05

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TNFAIP3	human parainfluenza virus type 3	PIV3	6	-0.51	0.51
ATF3	measles virus	MV	5	-0.11	0.11
B2M	vaccinia virus	VV	5	-0.16	0.16
B2M	influenza A virus	FLUAV	5	0.63	0.63
GCA	Sindbis virus AR86	SINV-A	5	0.49	0.49
GZMB	vaccinia virus	VV	5	-0.29	0.29
IFIH1	influenza A virus	FLUAV	5	-1.29	1.29
IFITM3	respiratory syncytial virus	RSV	5	0.23	0.23
IRF1	human parainfluenza virus type 3	PIV3	5	-2.08	2.08
IRF9	measles virus	MV	5	-1.87	1.87
MAP3K5	human parainfluenza virus type 3	PIV3	5	-0.02	0.02
MAP3K5	measles virus	MV	5	1.56	1.56
MAX	bunyamwera virus	BUNV	5	0.08	0.08
MICB	poliovirus	PV	5	-0.02	0.02
MICB	influenza A virus	FLUAV	5	-2.09	2.09
TNFAIP3	influenza A virus	FLUAV	5	-2.68	2.68
TNFAIP3	measles virus	MV	5	-0.07	0.07
ZBP1	influenza A virus	FLUAV	5	0.71	0.71
ADM	respiratory syncytial virus	RSV	4	-1.39	1.39
ADM	measles virus	MV	4	1.1	1.1
AQP9	respiratory syncytial virus	RSV	4	-1.13	1.13
ATF3	vaccinia virus	VV	4	-2.04	2.04
B4GALT5	measles virus	MV	4	-0.89	0.89
BCL3	measles virus	MV	4	0.08	0.08
DDX60	influenza A virus	FLUAV	4	-1.21	1.21
DYNLT1	poliovirus	PV	4	0.24	0.24
EPAS1	measles virus	MV	4	0.13	0.13
ETV6	poliovirus	PV	4	0.9	0.9
GALNT2	measles virus	MV	4	-0.13	0.13
GCA	Sindbis virus Girdwood	SINV-G	4	0.27	0.27
GCA	human metapneumovirus	HMPV	4	2.09	2.09
IRF2	influenza A virus	FLUAV	4	-0.93	0.93
IRF2	measles virus	MV	4	-2.39	2.39
IRF7	human parainfluenza virus type 3	PIV3	4	-1.49	1.49
IRF7	Newcastle disease virus	NDV	4	-1.74	1.74
IRF7	measles virus	MV	4	-1.06	1.06
MAFB	influenza A virus	FLUAV	4	-0.36	0.36
MAX	O'nyong nyong virus	ONNV	4	-1.19	1.19
MX1	human parainfluenza virus type 3	PIV3	4	0.42	0.42
TLR3	human parainfluenza virus type 3	PIV3	4	-0.36	0.36
TLR3	Newcastle disease virus	NDV	4	-1.47	1.47
ADAR	human parainfluenza virus type 3	PIV3	3	-0.2	0.2
ADM	human parainfluenza virus type 3	PIV3	3	0.24	0.24
APOL2	influenza A virus	FLUAV	3	1.98	1.98
B2M	measles virus	MV	3	-0.76	0.76
BCL3	human parainfluenza virus type 3	PIV3	3	-1.86	1.86
BST2	influenza A virus	FLUAV	3	-0.38	0.38
CD9	vaccinia virus	VV	3	0.24	0.24
cGAS	influenza A virus	FLUAV	3	-1.04	1.04
CMAH	human parainfluenza virus type 3	PIV3	3	-0.36	0.36
CMAH	measles virus	MV	3	1.08	1.08
DUSP5	human parainfluenza virus type 3	PIV3	3	-0.36	0.36
DUSP5	measles virus	MV	3	-0.07	0.07
ELF1	human parainfluenza virus type 3	PIV3	3	1.51	1.51
ELF1	measles virus	MV	3	1.19	1.19
EPAS1	human parainfluenza virus type 3	PIV3	3	1.73	1.73
ETV6	coxsackie B virus	CVB	3	0.27	0.27
GCA	human parainfluenza virus type 3	PIV3	3	1.19	1.19

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GZMB	human parainfluenza virus type 3	PIV3	3	2.16	2.16
GZMB	measles virus	MV	3	1.08	1.08
HPSE	human parainfluenza virus type 3	PIV3	3	1	1
HPSE	measles virus	MV	3	-1.2	1.2
IFIH1	measles virus	MV	3	2.49	2.49
IFIT1	measles virus	MV	3	0.1	0.1
IFITM2	vaccinia virus	VV	3	0.39	0.39
IFITM3	vaccinia virus	VV	3	0.28	0.28
IL6ST	vaccinia virus	VV	3	0.43	0.43
IRF1	measles virus	MV	3	-3.21	3.21
IRF2	human parainfluenza virus type 3	PIV3	3	-2.36	2.36
ISG20	human parainfluenza virus type 3	PIV3	3	-0.7	0.7
ISG20	measles virus	MV	3	-0.89	0.89
MAP3K14	human parainfluenza virus type 3	PIV3	3	-2.46	2.46
MAP3K14	measles virus	MV	3	-0.39	0.39
MX1	bunyamwera virus	BUNV	3	-1.14	1.14
NCF1	influenza A virus	FLUAV	3	-0.55	0.55
NPAS2	human parainfluenza virus type 3	PIV3	3	-0.87	0.87
NPAS2	measles virus	MV	3	0.78	0.78
OAS1	vaccinia virus	VV	3		
P2RY6	human parainfluenza virus type 3	PIV3	3	2.04	2.04
P2RY6	measles virus	MV	3	1.41	1.41
PSMB9	influenza A virus	FLUAV	3	-0.2	0.2
STAT2	bunyamwera virus	BUNV	3	-0.03	0.03
TFEC	human parainfluenza virus type 3	PIV3	3	1.39	1.39
TFEC	measles virus	MV	3	0.32	0.32
THBD	human parainfluenza virus type 3	PIV3	3	-0.12	0.12
THBD	measles virus	MV	3	-2.37	2.37
TLR7	human metapneumovirus	HMPV	3	1.77	1.77
TNFAIP3	vaccinia virus	VV	3		
TRIM14	human parainfluenza virus type 3	PIV3	3	-0.29	0.29
TRIM14	measles virus	MV	3	-0.98	0.98
ZBP1	respiratory syncytial virus	RSV	3	-0.09	0.09
BCL3	poliovirus	PV	2	-1.87	1.87
C22orf28	influenza A virus	FLUAV	2	0.14	0.14
CD9	influenza A virus	FLUAV	2	0.5	0.5
CD9	human parainfluenza virus type 3	PIV3	2	-1.93	1.93
CD9	Newcastle disease virus	NDV	2	1.12	1.12
CD9	respiratory syncytial virus	RSV	2	-0.97	0.97
CDKN1A	respiratory syncytial virus	RSV	2	-0.32	0.32
CMAH	vaccinia virus	VV	2	1.39	1.39
CMAH	influenza A virus	FLUAV	2	0.4	0.4
DDIT4	influenza A virus	FLUAV	2	0.32	0.32
DDX60	vaccinia virus	VV	2		
DDX60	measles virus	MV	2		
ELF1	influenza A virus	FLUAV	2	-0.66	0.66
EPSTI1	influenza A virus	FLUAV	2	0.05	0.05
EPSTI1	respiratory syncytial virus	RSV	2	-0.97	0.97
ETV6	measles virus	MV	2	-0.81	0.81
EXT1	influenza A virus	FLUAV	2	0.56	0.56
GBP3	influenza A virus	FLUAV	2	-1.14	1.14
GCA	coxsackie B virus	CVB	2	-0.56	0.56
IFI6	vaccinia virus	VV	2	1.75	1.75
IFIT1	poliovirus	PV	2	0.18	0.18
IFIT1	human metapneumovirus	HMPV	2	0.23	0.23
IFIT1	bunyamwera virus	BUNV	2	1.69	1.69
IFIT2	vaccinia virus	VV	2	0.34	0.34
IFIT5	vaccinia virus	VV	2	-0.09	0.09

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IFITM3	human metapneumovirus	HMPV	2	-1.97	1.97
IL6ST	influenza A virus	FLUAV	2	-1.08	1.08
INDO	vaccinia virus	VV	2	0.1	0.1
INDO	Newcastle disease virus	NDV	2	0.41	0.41
IRF2	vaccinia virus	VV	2		
IRF7	poliovirus	PV	2	0.32	0.32
IRF9	respiratory syncytial virus	RSV	2	0.28	0.28
LY6E	poliovirus	PV	2	0.58	0.58
MAP3K14	influenza A virus	FLUAV	2	-0.81	0.81
MARCKS	poliovirus	PV	2	2.54	2.54
MX1	poliovirus	PV	2	-1.11	1.11
MX1	Newcastle disease virus	NDV	2	-2.44	2.44
MX1	human metapneumovirus	HMPV	2	-0.64	0.64
MYD88	coxsackie B virus	CVB	2	0.85	0.85
MYD88	Sindbis virus AR86	SINV-A	2	0.49	0.49
MYD88	Newcastle disease virus	NDV	2	-0.07	0.07
NCOA3	influenza A virus	FLUAV	2	-0.84	0.84
OAS1	equine arterivirus	EAV	2	-4.1	4.1
OAS1	human parainfluenza virus type 3	PIV3	2	-0.52	0.52
OAS1	measles virus	MV	2	-0.42	0.42
OAS2	vaccinia virus	VV	2	0.69	0.69
OAS2	poliovirus	PV	2	0.2	0.2
OAS2	equine arterivirus	EAV	2	-3.32	3.32
OASL	human parainfluenza virus type 3	PIV3	2	-0.16	0.16
OASL	measles virus	MV	2	-1.17	1.17
PIM3	influenza A virus	FLUAV	2	-0.32	0.32
PSMB8	respiratory syncytial virus	RSV	2	-1.04	1.04
RBCK1	influenza A virus	FLUAV	2	-1.21	1.21
STAT2	Newcastle disease virus	NDV	2	-1.09	1.09
TLR3	coxsackie B virus	CVB	2	0.31	0.31
TLR3	human metapneumovirus	HMPV	2	0.13	0.13
TLR7	coxsackie B virus	CVB	2		
TRIM25	Newcastle disease virus	NDV	2	-0.56	0.56
ZBP1	bunyamwera virus	BUNV	2	0.1	0.1
ADAR	respiratory syncytial virus	RSV	1	-0.02	0.02
ADM	Newcastle disease virus	NDV	1	1.61	1.61
ADM	human metapneumovirus	HMPV	1	0.66	0.66
ANKRD22	poliovirus	PV	1	0.21	0.21
APOL1	influenza A virus	FLUAV	1	-0.02	0.02
APOL1	respiratory syncytial virus	RSV	1	-0.67	0.67
AQP9	poliovirus	PV	1	0.52	0.52
AQP9	influenza A virus	FLUAV	1	-1.2	1.2
ARHGEF3	respiratory syncytial virus	RSV	1	-0.35	0.35
B2M	poliovirus	PV	1	0.21	0.21
B2M	human parainfluenza virus type 3	PIV3	1	1.63	1.63
B2M	respiratory syncytial virus	RSV	1	0.66	0.66
BCL3	influenza A virus	FLUAV	1	-1.89	1.89
BCL3	respiratory syncytial virus	RSV	1	-1.3	1.3
CD9	poliovirus	PV	1	0.33	0.33
CD9	measles virus	MV	1	0.06	0.06
CLEC4D	influenza A virus	FLUAV	1	-0.69	0.69
DDIT4	respiratory syncytial virus	RSV	1	-0.14	0.14
DDX58	Newcastle disease virus	NDV	1	-0.03	0.03
DDX60	coxsackie B virus	CVB	1		
DDX60	respiratory syncytial virus	RSV	1	0.72	0.72
DUSP5	vaccinia virus	VV	1	-0.82	0.82
DUSP5	influenza A virus	FLUAV	1	-0.72	0.72
DUSP5	respiratory syncytial virus	RSV	1	0.5	0.5

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EHD4	vaccinia virus	VV	1	-4.79	4.79
ETV6	vaccinia virus	VV	1	0.74	0.74
ETV6	O'nyong nyong virus	ONNV	1	0.26	0.26
ETV6	human parainfluenza virus type 3	PIV3	1	-1.12	1.12
ETV6	Newcastle disease virus	NDV	1	0.14	0.14
ETV6	human metapneumovirus	HMPV	1	1.01	1.01
ETV6	bunyamwera virus	BUNV	1	0.75	0.75
FUT4	influenza A virus	FLUAV	1	1.45	1.45
GBP3	vaccinia virus	VV	1	-0.18	0.18
GBP3	respiratory syncytial virus	RSV	1	-0.08	0.08
GCA	bunyamwera virus	BUNV	1	0.41	0.41
IFIH1	human parainfluenza virus type 3	PIV3	1	-0.14	0.14
IFIH1	human metapneumovirus	HMPV	1	-0.1	0.1
IFIT1	Sindbis virus AR86	SINV-A	1	0.49	0.49
IFIT1	human parainfluenza virus type 3	PIV3	1	0.89	0.89
IFIT2	Sindbis virus AR86	SINV-A	1	0.73	0.73
IFIT2	measles virus	MV	1	-1.84	1.84
IFITM2	Newcastle disease virus	NDV	1	-1.61	1.61
IFITM3	Newcastle disease virus	NDV	1	-1.43	1.43
IMPA2	vaccinia virus	VV	1	-4.01	4.01
INDO	coxsackie B virus	CVB	1	0.66	0.66
INDO	measles virus	MV	1	0.21	0.21
IRF1	human metapneumovirus	HMPV	1	-0.61	0.61
IRF7	coxsackie B virus	CVB	1	0.54	0.54
IRF9	human parainfluenza virus type 3	PIV3	1	0.72	0.72
IRF9	Newcastle disease virus	NDV	1	2.3	2.3
IRF9	bunyamwera virus	BUNV	1	0.82	0.82
ISG20	respiratory syncytial virus	RSV	1	0.23	0.23
JUNB	influenza A virus	FLUAV	1	0.05	0.05
JUNB	respiratory syncytial virus	RSV	1	-1.18	1.18
MAFB	poliovirus	PV	1	1.34	1.34
MAFB	respiratory syncytial virus	RSV	1	3.03	3.03
MAP3K14	vaccinia virus	VV	1		
MAP3K5	influenza A virus	FLUAV	1	1.68	1.68
MAP3K5	human metapneumovirus	HMPV	1	0.4	0.4
MARCKS	influenza A virus	FLUAV	1	-0.88	0.88
MICB	vaccinia virus	VV	1	0.03	0.03
MICB	human metapneumovirus	HMPV	1	-1.16	1.16
MICB	respiratory syncytial virus	RSV	1	-2.03	2.03
MKX	vaccinia virus	VV	1	-2.84	2.84
MT1G	poliovirus	PV	1	0.1	0.1
MX1	coxsackie B virus	CVB	1	-2.17	2.17
MYD88	equine arterivirus	EAV	1	-1.98	1.98
MYD88	bunyamwera virus	BUNV	1	-1.43	1.43
NCF1	respiratory syncytial virus	RSV	1	-0.23	0.23
NFIL3	poliovirus	PV	1	-0.15	0.15
NFIL3	respiratory syncytial virus	RSV	1	-1.38	1.38
NFIL3	measles virus	MV	1	-0.03	0.03
NPAS2	influenza A virus	FLUAV	1	-0.73	0.73
OAS1	poliovirus	PV	1		
OAS1	bunyamwera virus	BUNV	1		
OAS2	bunyamwera virus	BUNV	1	-0.22	0.22
PARP12	influenza A virus	FLUAV	1	-0.03	0.03
PIM3	human parainfluenza virus type 3	PIV3	1	-0.91	0.91
PSMB8	vaccinia virus	VV	1	0.36	0.36
PSMB9	vaccinia virus	VV	1	0.83	0.83
RARRES3	influenza A virus	FLUAV	1	0.12	0.12
RGS1	influenza A virus	FLUAV	1	0.34	0.34

SCARB2	influenza A virus	FLUAV	1	0.34	0.34
SLC16A1	vaccinia virus	VV	1	-0.41	0.41
SOCS1	poliovirus	PV	1	0.53	0.53
STAT2	poliovirus	PV	1	-0.46	0.46
STAT2	Sindbis virus AR86	SINV-A	1	-0.65	0.65
STEAP4	poliovirus	PV	1	0.16	0.16
TBX3	influenza A virus	FLUAV	1	-1.55	1.55
TFEC	influenza A virus	FLUAV	1	2.25	2.25
THBD	influenza A virus	FLUAV	1	-0.73	0.73
THOC4	vaccinia virus	VV	1	0	0
THOC4	influenza A virus	FLUAV	1	-1.03	1.03
TLR3	bunyamwera virus	BUNV	1	-0.84	0.84
TLR7	Newcastle disease virus	NDV	1	1.12	1.12
TLR7	bunyamwera virus	BUNV	1		
TRIM14	influenza A virus	FLUAV	1	1.96	1.96
TRIM25	vaccinia virus	VV	1	3.23	3.23
TRIM25	poliovirus	PV	1	-4.82	4.82
TRIM25	human parainfluenza virus type 3	PIV3	1	-1.24	1.24
TRIM25	respiratory syncytial virus	RSV	1	-1.67	1.67
UNC93B1	Sindbis virus AR86	SINV-A	1	-4.94	4.94
ABLIM3	vaccinia virus	VV	0	0.39	0.39
ABLIM3	coxsackie B virus	CVB	0	-1.07	1.07
ABLIM3	poliovirus	PV	0	-0.04	0.04
ABLIM3	equine arterivirus	EAV	0	0.41	0.41
ABLIM3	Sindbis virus Girdwood	SINV-G	0	-0.41	0.41
ABLIM3	Sindbis virus AR86	SINV-A	0	0.5	0.5
ABLIM3	O'nyong nyong virus	ONNV	0	0.26	0.26
ABLIM3	influenza A virus	FLUAV	0	-1.82	1.82
ABLIM3	human parainfluenza virus type 3	PIV3	0	-1.57	1.57
ABLIM3	Newcastle disease virus	NDV	0	-0.32	0.32
ABLIM3	human metapneumovirus	HMPV	0	-0.63	0.63
ABLIM3	respiratory syncytial virus	RSV	0	0.68	0.68
ABLIM3	measles virus	MV	0	-2.06	2.06
ABLIM3	bunyamwera virus	BUNV	0	-0.24	0.24
ADAR	coxsackie B virus	CVB	0	-1.48	1.48
ADAR	poliovirus	PV	0	-0.02	0.02
ADAR	equine arterivirus	EAV	0	3.36	3.36
ADAR	Sindbis virus Girdwood	SINV-G	0	2.75	2.75
ADAR	Sindbis virus AR86	SINV-A	0		
ADAR	O'nyong nyong virus	ONNV	0	0.64	0.64
ADAR	Newcastle disease virus	NDV	0	0.56	0.56
ADAR	human metapneumovirus	HMPV	0	-1.26	1.26
ADAR	bunyamwera virus	BUNV	0	0.01	0.01
ADM	vaccinia virus	VV	0	-0.36	0.36
ADM	coxsackie B virus	CVB	0	-0.82	0.82
ADM	poliovirus	PV	0	0.24	0.24
ADM	equine arterivirus	EAV	0	-0.97	0.97
ADM	Sindbis virus Girdwood	SINV-G	0	0.86	0.86
ADM	Sindbis virus AR86	SINV-A	0	-0.4	0.4
ADM	O'nyong nyong virus	ONNV	0	-2.05	2.05
ADM	bunyamwera virus	BUNV	0	-0.07	0.07
AGPAT9	vaccinia virus	VV	0	-0.44	0.44
AGPAT9	coxsackie B virus	CVB	0	-0.75	0.75
AGPAT9	poliovirus	PV	0	-0.15	0.15
AGPAT9	equine arterivirus	EAV	0	0.68	0.68
AGPAT9	Sindbis virus Girdwood	SINV-G	0	-0.27	0.27
AGPAT9	Sindbis virus AR86	SINV-A	0	-2.81	2.81
AGPAT9	O'nyong nyong virus	ONNV	0	-0.07	0.07

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AGPAT9	influenza A virus	FLUAV	0	-0.06	0.06
AGPAT9	human parainfluenza virus type 3	PIV3	0	0.62	0.62
AGPAT9	Newcastle disease virus	NDV	0	0.57	0.57
AGPAT9	human metapneumovirus	HMPV	0	0.14	0.14
AGPAT9	respiratory syncytial virus	RSV	0	-0.07	0.07
AGPAT9	measles virus	MV	0	0.15	0.15
AGPAT9	bunyamwera virus	BUNV	0	1.75	1.75
ANKFY1	vaccinia virus	VV	0	-0.67	0.67
ANKFY1	coxsackie B virus	CVB	0	4	4
ANKFY1	poliovirus	PV	0	0.8	0.8
ANKFY1	equine arterivirus	EAV	0	1.99	1.99
ANKFY1	Sindbis virus Girdwood	SINV-G	0	1.24	1.24
ANKFY1	Sindbis virus AR86	SINV-A	0	1.39	1.39
ANKFY1	O'nyong nyong virus	ONNV	0		
ANKFY1	influenza A virus	FLUAV	0	-0.06	0.06
ANKFY1	human parainfluenza virus type 3	PIV3	0	0.89	0.89
ANKFY1	Newcastle disease virus	NDV	0	0.89	0.89
ANKFY1	human metapneumovirus	HMPV	0	1.37	1.37
ANKFY1	respiratory syncytial virus	RSV	0	1.58	1.58
ANKFY1	measles virus	MV	0	1.08	1.08
ANKFY1	bunyamwera virus	BUNV	0	0.14	0.14
ANKRD22	vaccinia virus	VV	0	-0.13	0.13
ANKRD22	coxsackie B virus	CVB	0	0.29	0.29
ANKRD22	equine arterivirus	EAV	0	0.61	0.61
ANKRD22	Sindbis virus Girdwood	SINV-G	0	0.05	0.05
ANKRD22	Sindbis virus AR86	SINV-A	0	-0.03	0.03
ANKRD22	O'nyong nyong virus	ONNV	0	0.73	0.73
ANKRD22	influenza A virus	FLUAV	0	-0.18	0.18
ANKRD22	human parainfluenza virus type 3	PIV3	0	-0.49	0.49
ANKRD22	Newcastle disease virus	NDV	0	-2.93	2.93
ANKRD22	human metapneumovirus	HMPV	0	-0.39	0.39
ANKRD22	respiratory syncytial virus	RSV	0	-0.1	0.1
ANKRD22	measles virus	MV	0	0.52	0.52
ANKRD22	bunyamwera virus	BUNV	0	0.18	0.18
APOL1	vaccinia virus	VV	0	0.19	0.19
APOL1	coxsackie B virus	CVB	0	1.21	1.21
APOL1	poliovirus	PV	0	0.31	0.31
APOL1	equine arterivirus	EAV	0		
APOL1	Sindbis virus Girdwood	SINV-G	0	-0.26	0.26
APOL1	Sindbis virus AR86	SINV-A	0	-2.9	2.9
APOL1	O'nyong nyong virus	ONNV	0	0.98	0.98
APOL1	human parainfluenza virus type 3	PIV3	0	-1.63	1.63
APOL1	Newcastle disease virus	NDV	0	-0.21	0.21
APOL1	human metapneumovirus	HMPV	0	-1.16	1.16
APOL1	measles virus	MV	0	0.95	0.95
APOL1	bunyamwera virus	BUNV	0	0.22	0.22
APOL2	vaccinia virus	VV	0	0.13	0.13
APOL2	coxsackie B virus	CVB	0	0.1	0.1
APOL2	poliovirus	PV	0	-0.5	0.5
APOL2	equine arterivirus	EAV	0	0.22	0.22
APOL2	Sindbis virus Girdwood	SINV-G	0	0.41	0.41
APOL2	Sindbis virus AR86	SINV-A	0	0.59	0.59
APOL2	O'nyong nyong virus	ONNV	0	1.09	1.09
APOL2	human parainfluenza virus type 3	PIV3	0	1.21	1.21
APOL2	Newcastle disease virus	NDV	0	-0.73	0.73
APOL2	human metapneumovirus	HMPV	0	0.07	0.07
APOL2	respiratory syncytial virus	RSV	0	2.38	2.38
APOL2	measles virus	MV	0	1.3	1.3



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APOL2	bunyamwera virus	BUNV	0	0.67	0.67
APOL6	vaccinia virus	VV	0	-0.2	0.2
APOL6	coxsackie B virus	CVB	0	-2.19	2.19
APOL6	poliovirus	PV	0	-5.15	5.15
APOL6	equine arterivirus	EAV	0	0.92	0.92
APOL6	Sindbis virus Girdwood	SINV-G	0	0.67	0.67
APOL6	Sindbis virus AR86	SINV-A	0	0.81	0.81
APOL6	O'nyong nyong virus	ONNV	0	1.15	1.15
APOL6	influenza A virus	FLUAV	0	1.17	1.17
APOL6	human parainfluenza virus type 3	PIV3	0	-0.33	0.33
APOL6	Newcastle disease virus	NDV	0		
APOL6	human metapneumovirus	HMPV	0	-0.81	0.81
APOL6	respiratory syncytial virus	RSV	0	2.36	2.36
APOL6	measles virus	MV	0	1.38	1.38
APOL6	bunyamwera virus	BUNV	0		
AQP9	vaccinia virus	VV	0	-0.08	0.08
AQP9	coxsackie B virus	CVB	0	-0.24	0.24
AQP9	equine arterivirus	EAV	0	-0.4	0.4
AQP9	Sindbis virus Girdwood	SINV-G	0	-2.44	2.44
AQP9	Sindbis virus AR86	SINV-A	0	-1.54	1.54
AQP9	O'nyong nyong virus	ONNV	0	0.23	0.23
AQP9	human parainfluenza virus type 3	PIV3	0	0.39	0.39
AQP9	Newcastle disease virus	NDV	0	-0.06	0.06
AQP9	human metapneumovirus	HMPV	0	-0.96	0.96
AQP9	measles virus	MV	0	-1.85	1.85
AQP9	bunyamwera virus	BUNV	0	0.16	0.16
ARHGEF3	vaccinia virus	VV	0	2.37	2.37
ARHGEF3	coxsackie B virus	CVB	0	-0.71	0.71
ARHGEF3	poliovirus	PV	0	1.45	1.45
ARHGEF3	equine arterivirus	EAV	0	-1.39	1.39
ARHGEF3	Sindbis virus Girdwood	SINV-G	0	0.59	0.59
ARHGEF3	Sindbis virus AR86	SINV-A	0	-0.27	0.27
ARHGEF3	O'nyong nyong virus	ONNV	0	-1.28	1.28
ARHGEF3	influenza A virus	FLUAV	0	0.08	0.08
ARHGEF3	human parainfluenza virus type 3	PIV3	0	0.37	0.37
ARHGEF3	Newcastle disease virus	NDV	0	0.61	0.61
ARHGEF3	human metapneumovirus	HMPV	0	-0.23	0.23
ARHGEF3	measles virus	MV	0	-0.05	0.05
ARHGEF3	bunyamwera virus	BUNV	0	0.9	0.9
ATF3	coxsackie B virus	CVB	0	-1.39	1.39
ATF3	poliovirus	PV	0	-0.25	0.25
ATF3	equine arterivirus	EAV	0	-0.36	0.36
ATF3	Sindbis virus Girdwood	SINV-G	0	-1.4	1.4
ATF3	Sindbis virus AR86	SINV-A	0	-0.9	0.9
ATF3	O'nyong nyong virus	ONNV	0	0	0
ATF3	Newcastle disease virus	NDV	0	-1.18	1.18
ATF3	human metapneumovirus	HMPV	0	-0.64	0.64
ATF3	bunyamwera virus	BUNV	0	0.9	0.9
ATP10D	vaccinia virus	VV	0	-0.38	0.38
ATP10D	coxsackie B virus	CVB	0	-1.08	1.08
ATP10D	poliovirus	PV	0	-0.87	0.87
ATP10D	equine arterivirus	EAV	0	0.32	0.32
ATP10D	Sindbis virus Girdwood	SINV-G	0	0.55	0.55
ATP10D	Sindbis virus AR86	SINV-A	0	0.74	0.74
ATP10D	O'nyong nyong virus	ONNV	0	0.35	0.35
ATP10D	influenza A virus	FLUAV	0	-0.85	0.85
ATP10D	human parainfluenza virus type 3	PIV3	0	0.22	0.22
ATP10D	Newcastle disease virus	NDV	0	2.06	2.06

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ATP10D	human metapneumovirus	HMPV	0	-0.15	0.15
ATP10D	respiratory syncytial virus	RSV	0	0.39	0.39
ATP10D	measles virus	MV	0	-1.28	1.28
ATP10D	bunyamwera virus	BUNV	0	0.18	0.18
B2M	coxsackie B virus	CVB	0	0.68	0.68
B2M	equine arterivirus	EAV	0	1.03	1.03
B2M	Sindbis virus Girdwood	SINV-G	0	-0.04	0.04
B2M	Sindbis virus AR86	SINV-A	0	-0.19	0.19
B2M	O'nyong nyong virus	ONNV	0	-0.1	0.1
B2M	Newcastle disease virus	NDV	0	0.3	0.3
B2M	human metapneumovirus	HMPV	0	2.09	2.09
B2M	bunyamwera virus	BUNV	0	-0.77	0.77
B4GALT5	vaccinia virus	VV	0		
B4GALT5	coxsackie B virus	CVB	0		
B4GALT5	poliovirus	PV	0	0.46	0.46
B4GALT5	equine arterivirus	EAV	0	-0.09	0.09
B4GALT5	Sindbis virus Girdwood	SINV-G	0	0.81	0.81
B4GALT5	Sindbis virus AR86	SINV-A	0	1.09	1.09
B4GALT5	O'nyong nyong virus	ONNV	0	0.76	0.76
B4GALT5	influenza A virus	FLUAV	0	-0.73	0.73
B4GALT5	Newcastle disease virus	NDV	0	0.09	0.09
B4GALT5	human metapneumovirus	HMPV	0	-0.4	0.4
B4GALT5	respiratory syncytial virus	RSV	0	-1.1	1.1
B4GALT5	bunyamwera virus	BUNV	0	1.99	1.99
BCL3	coxsackie B virus	CVB	0	-2.31	2.31
BCL3	equine arterivirus	EAV	0	-1.54	1.54
BCL3	Sindbis virus Girdwood	SINV-G	0	-0.6	0.6
BCL3	Sindbis virus AR86	SINV-A	0	0.19	0.19
BCL3	O'nyong nyong virus	ONNV	0	-1.93	1.93
BCL3	Newcastle disease virus	NDV	0	-0.39	0.39
BCL3	human metapneumovirus	HMPV	0	-1.56	1.56
BCL3	bunyamwera virus	BUNV	0	1.09	1.09
BST2	vaccinia virus	VV	0		
BST2	coxsackie B virus	CVB	0		
BST2	poliovirus	PV	0		
BST2	equine arterivirus	EAV	0	0.77	0.77
BST2	Sindbis virus Girdwood	SINV-G	0	-0.77	0.77
BST2	Sindbis virus AR86	SINV-A	0	-0.73	0.73
BST2	O'nyong nyong virus	ONNV	0		
BST2	human parainfluenza virus type 3	PIV3	0	-0.33	0.33
BST2	Newcastle disease virus	NDV	0	-2.01	2.01
BST2	human metapneumovirus	HMPV	0	-1.62	1.62
BST2	respiratory syncytial virus	RSV	0	0.11	0.11
BST2	measles virus	MV	0	0.13	0.13
BST2	bunyamwera virus	BUNV	0		
C22orf28	vaccinia virus	VV	0	-0.01	0.01
C22orf28	coxsackie B virus	CVB	0	0.56	0.56
C22orf28	poliovirus	PV	0	0.21	0.21
C22orf28	equine arterivirus	EAV	0	0.06	0.06
C22orf28	Sindbis virus Girdwood	SINV-G	0	0.32	0.32
C22orf28	Sindbis virus AR86	SINV-A	0	0.21	0.21
C22orf28	O'nyong nyong virus	ONNV	0	0.2	0.2
C22orf28	human parainfluenza virus type 3	PIV3	0	1.05	1.05
C22orf28	Newcastle disease virus	NDV	0	-0.23	0.23
C22orf28	human metapneumovirus	HMPV	0	2.51	2.51
C22orf28	respiratory syncytial virus	RSV	0	0.73	0.73
C22orf28	measles virus	MV	0	1	1

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C2orf28	bunyamwera virus	BUNV	0	-0.26	0.26
C5orf39	vaccinia virus	VV	0	-0.83	0.83
C5orf39	coxsackie B virus	CVB	0		
C5orf39	poliovirus	PV	0		
C5orf39	equine arterivirus	EAV	0		
C5orf39	Sindbis virus Girdwood	SINV-G	0	-1.85	1.85
C5orf39	Sindbis virus AR86	SINV-A	0		
C5orf39	O'nyong nyong virus	ONNV	0		
C5orf39	influenza A virus	FLUAV	0	-0.91	0.91
C5orf39	human parainfluenza virus type 3	PIV3	0		
C5orf39	Newcastle disease virus	NDV	0	0.73	0.73
C5orf39	human metapneumovirus	HMPV	0	-0.62	0.62
C5orf39	respiratory syncytial virus	RSV	0		
C5orf39	measles virus	MV	0	-2.8	2.8
C5orf39	bunyamwera virus	BUNV	0	-1.77	1.77
C9orf19	vaccinia virus	VV	0	-0.15	0.15
C9orf19	coxsackie B virus	CVB	0	0.81	0.81
C9orf19	poliovirus	PV	0	0.3	0.3
C9orf19	equine arterivirus	EAV	0	-0.2	0.2
C9orf19	Sindbis virus Girdwood	SINV-G	0	0.24	0.24
C9orf19	Sindbis virus AR86	SINV-A	0	0.56	0.56
C9orf19	O'nyong nyong virus	ONNV	0	1.23	1.23
C9orf19	influenza A virus	FLUAV	0	-0.53	0.53
C9orf19	human parainfluenza virus type 3	PIV3	0	-0.57	0.57
C9orf19	Newcastle disease virus	NDV	0	-1.24	1.24
C9orf19	human metapneumovirus	HMPV	0	-2.02	2.02
C9orf19	respiratory syncytial virus	RSV	0	0.24	0.24
C9orf19	measles virus	MV	0	0.58	0.58
C9orf19	bunyamwera virus	BUNV	0	-1.79	1.79
C9orf91	vaccinia virus	VV	0	0.2	0.2
C9orf91	coxsackie B virus	CVB	0	2.43	2.43
C9orf91	poliovirus	PV	0	0.68	0.68
C9orf91	equine arterivirus	EAV	0		
C9orf91	Sindbis virus Girdwood	SINV-G	0	0.65	0.65
C9orf91	Sindbis virus AR86	SINV-A	0	-0.75	0.75
C9orf91	O'nyong nyong virus	ONNV	0	-0.32	0.32
C9orf91	influenza A virus	FLUAV	0	-0.98	0.98
C9orf91	human parainfluenza virus type 3	PIV3	0	-0.07	0.07
C9orf91	Newcastle disease virus	NDV	0	1.61	1.61
C9orf91	human metapneumovirus	HMPV	0	1.94	1.94
C9orf91	respiratory syncytial virus	RSV	0	-0.38	0.38
C9orf91	measles virus	MV	0	-0.05	0.05
C9orf91	bunyamwera virus	BUNV	0	0.1	0.1
CCDC75	vaccinia virus	VV	0	0.27	0.27
CCDC75	coxsackie B virus	CVB	0	0.66	0.66
CCDC75	poliovirus	PV	0	1.16	1.16
CCDC75	equine arterivirus	EAV	0	0.13	0.13
CCDC75	Sindbis virus Girdwood	SINV-G	0	-0.03	0.03
CCDC75	Sindbis virus AR86	SINV-A	0	0.18	0.18
CCDC75	O'nyong nyong virus	ONNV	0	0.99	0.99
CCDC75	influenza A virus	FLUAV	0	0.16	0.16
CCDC75	human parainfluenza virus type 3	PIV3	0	-0.17	0.17
CCDC75	Newcastle disease virus	NDV	0	-0.83	0.83
CCDC75	human metapneumovirus	HMPV	0	-0.98	0.98
CCDC75	respiratory syncytial virus	RSV	0	-0.09	0.09
CCDC75	measles virus	MV	0	1.52	1.52
CCDC75	bunyamwera virus	BUNV	0	2.12	2.12

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CD9	coxsackie B virus	CVB	0	0.81	0.81
CD9	equine arterivirus	EAV	0	0.48	0.48
CD9	Sindbis virus Girdwood	SINV-G	0	-1.44	1.44
CD9	Sindbis virus AR86	SINV-A	0	-0.87	0.87
CD9	O'nyong nyong virus	ONNV	0	0.98	0.98
CD9	human metapneumovirus	HMPV	0	-2.01	2.01
CD9	bunyamwera virus	BUNV	0	-0.88	0.88
CDKN1A	vaccinia virus	VV	0	-0.49	0.49
CDKN1A	coxsackie B virus	CVB	0	0.48	0.48
CDKN1A	poliovirus	PV	0	0.24	0.24
CDKN1A	equine arterivirus	EAV	0	0.08	0.08
CDKN1A	Sindbis virus Girdwood	SINV-G	0		
CDKN1A	Sindbis virus AR86	SINV-A	0		
CDKN1A	O'nyong nyong virus	ONNV	0		
CDKN1A	influenza A virus	FLUAV	0		
CDKN1A	Newcastle disease virus	NDV	0	0.08	0.08
CDKN1A	human metapneumovirus	HMPV	0	-2.18	2.18
CDKN1A	bunyamwera virus	BUNV	0	0.88	0.88
cGAS	coxsackie B virus	CVB	0	-1.36	1.36
cGAS	poliovirus	PV	0	-0.56	0.56
cGAS	equine arterivirus	EAV	0	-2.51	2.51
cGAS	Sindbis virus Girdwood	SINV-G	0	-3.49	3.49
cGAS	Sindbis virus AR86	SINV-A	0	-3.91	3.91
cGAS	O'nyong nyong virus	ONNV	0	-2.7	2.7
cGAS	human parainfluenza virus type 3	PIV3	0	-0.52	0.52
cGAS	Newcastle disease virus	NDV	0	0.68	0.68
cGAS	human metapneumovirus	HMPV	0	0.44	0.44
cGAS	respiratory syncytial virus	RSV	0	-2.29	2.29
cGAS	measles virus	MV	0	-1.33	1.33
cGAS	bunyamwera virus	BUNV	0	0.59	0.59
CLEC4D	vaccinia virus	VV	0	0.06	0.06
CLEC4D	coxsackie B virus	CVB	0	-1.12	1.12
CLEC4D	poliovirus	PV	0	0.07	0.07
CLEC4D	equine arterivirus	EAV	0	-0.33	0.33
CLEC4D	Sindbis virus Girdwood	SINV-G	0	-0.59	0.59
CLEC4D	Sindbis virus AR86	SINV-A	0	-0.43	0.43
CLEC4D	O'nyong nyong virus	ONNV	0	-0.07	0.07
CLEC4D	human parainfluenza virus type 3	PIV3	0	-0.2	0.2
CLEC4D	Newcastle disease virus	NDV	0	0.55	0.55
CLEC4D	human metapneumovirus	HMPV	0	0.5	0.5
CLEC4D	respiratory syncytial virus	RSV	0	-1.08	1.08
CLEC4D	measles virus	MV	0	-2.13	2.13
CLEC4D	bunyamwera virus	BUNV	0	-0.29	0.29
CMAH	coxsackie B virus	CVB	0	0.54	0.54
CMAH	poliovirus	PV	0	0.24	0.24
CMAH	equine arterivirus	EAV	0	0.06	0.06
CMAH	Sindbis virus Girdwood	SINV-G	0	-0.45	0.45
CMAH	Sindbis virus AR86	SINV-A	0	-0.25	0.25
CMAH	O'nyong nyong virus	ONNV	0	0.81	0.81
CMAH	Newcastle disease virus	NDV	0	-0.8	0.8
CMAH	human metapneumovirus	HMPV	0	-1.42	1.42
CMAH	respiratory syncytial virus	RSV	0	0.31	0.31
CMAH	bunyamwera virus	BUNV	0	2.01	2.01
CREB3L3	vaccinia virus	VV	0	0.37	0.37
CREB3L3	coxsackie B virus	CVB	0	0.44	0.44
CREB3L3	poliovirus	PV	0	0.4	0.4
CREB3L3	equine arterivirus	EAV	0	-0.31	0.31
CREB3L3	Sindbis virus Girdwood	SINV-G	0	0.99	0.99

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CREB3L3	Sindbis virus AR86	SINV-A	0	0.36	0.36
CREB3L3	O'nyong nyong virus	ONNV	0	-1.34	1.34
CREB3L3	influenza A virus	FLUAV	0	1.89	1.89
CREB3L3	human parainfluenza virus type 3	PIV3	0	2.58	2.58
CREB3L3	Newcastle disease virus	NDV	0	0.5	0.5
CREB3L3	human metapneumovirus	HMPV	0	-0.38	0.38
CREB3L3	respiratory syncytial virus	RSV	0	-0.18	0.18
CREB3L3	measles virus	MV	0	0.06	0.06
CREB3L3	bunyamwera virus	BUNV	0	1.69	1.69
DDIT4	vaccinia virus	VV	0	-0.34	0.34
DDIT4	coxsackie B virus	CVB	0	1.62	1.62
DDIT4	poliovirus	PV	0	0.1	0.1
DDIT4	equine arterivirus	EAV	0		
DDIT4	Sindbis virus Girdwood	SINV-G	0	-0.42	0.42
DDIT4	Sindbis virus AR86	SINV-A	0	-0.31	0.31
DDIT4	O'nyong nyong virus	ONNV	0	-0.87	0.87
DDIT4	human parainfluenza virus type 3	PIV3	0	2.73	2.73
DDIT4	Newcastle disease virus	NDV	0	0.75	0.75
DDIT4	human metapneumovirus	HMPV	0	1.39	1.39
DDIT4	measles virus	MV	0	0.37	0.37
DDIT4	bunyamwera virus	BUNV	0	0.06	0.06
DDX58	vaccinia virus	VV	0		
DDX58	coxsackie B virus	CVB	0		
DDX58	poliovirus	PV	0		
DDX58	equine arterivirus	EAV	0	-0.29	0.29
DDX58	Sindbis virus Girdwood	SINV-G	0	-1.31	1.31
DDX58	Sindbis virus AR86	SINV-A	0	-1.44	1.44
DDX58	O'nyong nyong virus	ONNV	0	1.12	1.12
DDX58	human parainfluenza virus type 3	PIV3	0	0.28	0.28
DDX58	human metapneumovirus	HMPV	0	0.98	0.98
DDX58	bunyamwera virus	BUNV	0	-0.52	0.52
DDX60	poliovirus	PV	0		
DDX60	equine arterivirus	EAV	0	1.35	1.35
DDX60	Sindbis virus Girdwood	SINV-G	0	2.25	2.25
DDX60	Sindbis virus AR86	SINV-A	0		
DDX60	O'nyong nyong virus	ONNV	0		
DDX60	human parainfluenza virus type 3	PIV3	0		
DDX60	Newcastle disease virus	NDV	0	0.71	0.71
DDX60	human metapneumovirus	HMPV	0	1.36	1.36
DDX60	bunyamwera virus	BUNV	0	0.29	0.29
DUSP5	coxsackie B virus	CVB	0	2.54	2.54
DUSP5	poliovirus	PV	0	-0.03	0.03
DUSP5	equine arterivirus	EAV	0		
DUSP5	Sindbis virus Girdwood	SINV-G	0	0.5	0.5
DUSP5	Sindbis virus AR86	SINV-A	0	0.42	0.42
DUSP5	O'nyong nyong virus	ONNV	0	0.29	0.29
DUSP5	Newcastle disease virus	NDV	0	0.38	0.38
DUSP5	human metapneumovirus	HMPV	0	1.31	1.31
DUSP5	bunyamwera virus	BUNV	0	0.63	0.63
DYNLT1	vaccinia virus	VV	0	-0.19	0.19
DYNLT1	coxsackie B virus	CVB	0	0.78	0.78
DYNLT1	equine arterivirus	EAV	0	-0.82	0.82
DYNLT1	Sindbis virus Girdwood	SINV-G	0	0.83	0.83
DYNLT1	Sindbis virus AR86	SINV-A	0	0.42	0.42
DYNLT1	O'nyong nyong virus	ONNV	0	-0.18	0.18
DYNLT1	influenza A virus	FLUAV	0	1.21	1.21
DYNLT1	human parainfluenza virus type 3	PIV3	0	2.21	2.21

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DYNLT1	Newcastle disease virus	NDV	0	-0.25	0.25
DYNLT1	human metapneumovirus	HMPV	0	0.26	0.26
DYNLT1	respiratory syncytial virus	RSV	0	0.22	0.22
DYNLT1	measles virus	MV	0	1.04	1.04
DYNLT1	bunyamwera virus	BUNV	0	-0.79	0.79
EHD4	coxsackie B virus	CVB	0	-1.23	1.23
EHD4	poliovirus	PV	0	-3.17	3.17
EHD4	equine arterivirus	EAV	0	-0.44	0.44
EHD4	Sindbis virus Girdwood	SINV-G	0	-2.74	2.74
EHD4	Sindbis virus AR86	SINV-A	0	-2.69	2.69
EHD4	O'nyong nyong virus	ONNV	0	-1.26	1.26
EHD4	influenza A virus	FLUAV	0	0.14	0.14
EHD4	human parainfluenza virus type 3	PIV3	0	-0.65	0.65
EHD4	Newcastle disease virus	NDV	0	-0.39	0.39
EHD4	human metapneumovirus	HMPV	0	-0.06	0.06
EHD4	respiratory syncytial virus	RSV	0	-1.11	1.11
EHD4	measles virus	MV	0	-0.7	0.7
EHD4	bunyamwera virus	BUNV	0	-1.11	1.11
ELF1	vaccinia virus	VV	0	-0.04	0.04
ELF1	coxsackie B virus	CVB	0		
ELF1	poliovirus	PV	0	-3.22	3.22
ELF1	equine arterivirus	EAV	0	-0.33	0.33
ELF1	Sindbis virus Girdwood	SINV-G	0	0.29	0.29
ELF1	Sindbis virus AR86	SINV-A	0	-0.39	0.39
ELF1	O'nyong nyong virus	ONNV	0	0.34	0.34
ELF1	Newcastle disease virus	NDV	0	1.06	1.06
ELF1	human metapneumovirus	HMPV	0	-0.23	0.23
ELF1	respiratory syncytial virus	RSV	0	1.31	1.31
ELF1	bunyamwera virus	BUNV	0		
EPAS1	vaccinia virus	VV	0	-2.01	2.01
EPAS1	coxsackie B virus	CVB	0	2.43	2.43
EPAS1	poliovirus	PV	0	1.97	1.97
EPAS1	equine arterivirus	EAV	0		
EPAS1	Sindbis virus Girdwood	SINV-G	0	-0.81	0.81
EPAS1	Sindbis virus AR86	SINV-A	0	-0.07	0.07
EPAS1	O'nyong nyong virus	ONNV	0	0.43	0.43
EPAS1	influenza A virus	FLUAV	0	1.8	1.8
EPAS1	Newcastle disease virus	NDV	0	0.95	0.95
EPAS1	human metapneumovirus	HMPV	0	1.97	1.97
EPAS1	respiratory syncytial virus	RSV	0	0.79	0.79
EPAS1	bunyamwera virus	BUNV	0	-0.2	0.2
EPSTI1	vaccinia virus	VV	0	-0.51	0.51
EPSTI1	coxsackie B virus	CVB	0	1.39	1.39
EPSTI1	poliovirus	PV	0	-4.61	4.61
EPSTI1	equine arterivirus	EAV	0	0.24	0.24
EPSTI1	Sindbis virus Girdwood	SINV-G	0	0.45	0.45
EPSTI1	Sindbis virus AR86	SINV-A	0	0.14	0.14
EPSTI1	O'nyong nyong virus	ONNV	0	0.47	0.47
EPSTI1	human parainfluenza virus type 3	PIV3	0	-0.84	0.84
EPSTI1	Newcastle disease virus	NDV	0	0.27	0.27
EPSTI1	human metapneumovirus	HMPV	0	-0.47	0.47
EPSTI1	measles virus	MV	0	0.26	0.26
EPSTI1	bunyamwera virus	BUNV	0	-0.48	0.48
ETV6	equine arterivirus	EAV	0	0.24	0.24
ETV6	Sindbis virus Girdwood	SINV-G	0	-0.15	0.15
ETV6	Sindbis virus AR86	SINV-A	0	0.24	0.24
ETV7	vaccinia virus	VV	0	0.03	0.03
ETV7	coxsackie B virus	CVB	0	0.74	0.74

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ETV7	poliovirus	PV	0	1.11	1.11
ETV7	equine arterivirus	EAV	0	0.13	0.13
ETV7	Sindbis virus Girdwood	SINV-G	0	-0.95	0.95
ETV7	Sindbis virus AR86	SINV-A	0	-0.06	0.06
ETV7	O'nyong nyong virus	ONNV	0	-0.18	0.18
ETV7	human parainfluenza virus type 3	PIV3	0	-1.06	1.06
ETV7	Newcastle disease virus	NDV	0	0.05	0.05
ETV7	human metapneumovirus	HMPV	0	-0.54	0.54
ETV7	measles virus	MV	0	-0.28	0.28
ETV7	bunyamwera virus	BUNV	0	-1.65	1.65
EXT1	vaccinia virus	VV	0	-4.99	4.99
EXT1	coxsackie B virus	CVB	0	-0.15	0.15
EXT1	poliovirus	PV	0	0.69	0.69
EXT1	equine arterivirus	EAV	0	-0.02	0.02
EXT1	Sindbis virus Girdwood	SINV-G	0	1.17	1.17
EXT1	Sindbis virus AR86	SINV-A	0	1.24	1.24
EXT1	O'nyong nyong virus	ONNV	0		
EXT1	human parainfluenza virus type 3	PIV3	0	0.13	0.13
EXT1	Newcastle disease virus	NDV	0	-2.72	2.72
EXT1	human metapneumovirus	HMPV	0	-0.22	0.22
EXT1	respiratory syncytial virus	RSV	0	-0.4	0.4
EXT1	measles virus	MV	0	-0.02	0.02
EXT1	bunyamwera virus	BUNV	0	-0.88	0.88
FAM134B	vaccinia virus	VV	0	-2.15	2.15
FAM134B	coxsackie B virus	CVB	0	-0.56	0.56
FAM134B	poliovirus	PV	0	-1.17	1.17
FAM134B	equine arterivirus	EAV	0	0.52	0.52
FAM134B	Sindbis virus Girdwood	SINV-G	0	-0.37	0.37
FAM134B	Sindbis virus AR86	SINV-A	0	-2.45	2.45
FAM134B	O'nyong nyong virus	ONNV	0	-1.42	1.42
FAM134B	influenza A virus	FLUAV	0	0.36	0.36
FAM134B	human parainfluenza virus type 3	PIV3	0	2.15	2.15
FAM134B	Newcastle disease virus	NDV	0	-0.43	0.43
FAM134B	human metapneumovirus	HMPV	0	-0.98	0.98
FAM134B	respiratory syncytial virus	RSV	0	0.26	0.26
FAM134B	measles virus	MV	0	-1.24	1.24
FAM134B	bunyamwera virus	BUNV	0	-0.97	0.97
FAM46A	vaccinia virus	VV	0	-0.28	0.28
FAM46A	coxsackie B virus	CVB	0	-1.4	1.4
FAM46A	poliovirus	PV	0	-0.96	0.96
FAM46A	equine arterivirus	EAV	0	0.02	0.02
FAM46A	Sindbis virus Girdwood	SINV-G	0	-0.46	0.46
FAM46A	Sindbis virus AR86	SINV-A	0	0.56	0.56
FAM46A	O'nyong nyong virus	ONNV	0	0.43	0.43
FAM46A	influenza A virus	FLUAV	0	-2.67	2.67
FAM46A	human parainfluenza virus type 3	PIV3	0	-0.17	0.17
FAM46A	Newcastle disease virus	NDV	0	0.21	0.21
FAM46A	human metapneumovirus	HMPV	0	-0.6	0.6
FAM46A	respiratory syncytial virus	RSV	0	-0.74	0.74
FAM46A	measles virus	MV	0	-1.56	1.56
FAM46A	bunyamwera virus	BUNV	0	1.03	1.03
FFAR2	vaccinia virus	VV	0		
FFAR2	coxsackie B virus	CVB	0		
FFAR2	poliovirus	PV	0		
FFAR2	equine arterivirus	EAV	0	-0.6	0.6
FFAR2	Sindbis virus Girdwood	SINV-G	0	-0.41	0.41
FFAR2	Sindbis virus AR86	SINV-A	0	0.31	0.31
FFAR2	O'nyong nyong virus	ONNV	0	0.05	0.05

FFAR2	influenza A virus	FLUAV	0	-0.38	0.38
FFAR2	human parainfluenza virus type 3	PIV3	0	0.97	0.97
FFAR2	Newcastle disease virus	NDV	0	-2.21	2.21
FFAR2	human metapneumovirus	HMPV	0	-0.78	0.78
FFAR2	respiratory syncytial virus	RSV	0	-0.93	0.93
FFAR2	measles virus	MV	0	1	1
FFAR2	bunyamwera virus	BUNV	0		
FLJ23556	vaccinia virus	VV	0	-0.33	0.33
FLJ23556	coxsackie B virus	CVB	0	-0.46	0.46
FLJ23556	poliovirus	PV	0	-0.05	0.05
FLJ23556	equine arterivirus	EAV	0	0.04	0.04
FLJ23556	Sindbis virus Girdwood	SINV-G	0	0.5	0.5
FLJ23556	Sindbis virus AR86	SINV-A	0	0.07	0.07
FLJ23556	O'nyong nyong virus	ONNV	0	-2.23	2.23
FLJ23556	influenza A virus	FLUAV	0	0.46	0.46
FLJ23556	human parainfluenza virus type 3	PIV3	0	1.1	1.1
FLJ23556	Newcastle disease virus	NDV	0	1.57	1.57
FLJ23556	human metapneumovirus	HMPV	0	0.54	0.54
FLJ23556	respiratory syncytial virus	RSV	0	0.51	0.51
FLJ23556	measles virus	MV	0	1.45	1.45
FLJ23556	bunyamwera virus	BUNV	0	0.44	0.44
FNDC3B	vaccinia virus	VV	0	-0.11	0.11
FNDC3B	coxsackie B virus	CVB	0	2.16	2.16
FNDC3B	poliovirus	PV	0	0.01	0.01
FNDC3B	equine arterivirus	EAV	0	1.1	1.1
FNDC3B	Sindbis virus Girdwood	SINV-G	0	1.58	1.58
FNDC3B	Sindbis virus AR86	SINV-A	0		
FNDC3B	O'nyong nyong virus	ONNV	0	0.65	0.65
FNDC3B	influenza A virus	FLUAV	0	-1.12	1.12
FNDC3B	human parainfluenza virus type 3	PIV3	0	0.08	0.08
FNDC3B	Newcastle disease virus	NDV	0	0.16	0.16
FNDC3B	human metapneumovirus	HMPV	0	1.1	1.1
FNDC3B	respiratory syncytial virus	RSV	0	1.48	1.48
FNDC3B	measles virus	MV	0	1.71	1.71
FNDC3B	bunyamwera virus	BUNV	0	1.03	1.03
FUT4	vaccinia virus	VV	0	-0.32	0.32
FUT4	coxsackie B virus	CVB	0	0.9	0.9
FUT4	poliovirus	PV	0	0.16	0.16
FUT4	equine arterivirus	EAV	0	-2.16	2.16
FUT4	Sindbis virus Girdwood	SINV-G	0	-0.59	0.59
FUT4	Sindbis virus AR86	SINV-A	0	-2.07	2.07
FUT4	O'nyong nyong virus	ONNV	0	-1.57	1.57
FUT4	human parainfluenza virus type 3	PIV3	0	-0.4	0.4
FUT4	Newcastle disease virus	NDV	0	-0.8	0.8
FUT4	human metapneumovirus	HMPV	0	-0.66	0.66
FUT4	respiratory syncytial virus	RSV	0	-0.84	0.84
FUT4	measles virus	MV	0	0.58	0.58
FUT4	bunyamwera virus	BUNV	0	1.26	1.26
GALNT2	vaccinia virus	VV	0	-2.47	2.47
GALNT2	coxsackie B virus	CVB	0	2.24	2.24
GALNT2	poliovirus	PV	0	0.3	0.3
GALNT2	equine arterivirus	EAV	0		
GALNT2	Sindbis virus Girdwood	SINV-G	0	-0.91	0.91
GALNT2	Sindbis virus AR86	SINV-A	0	-0.44	0.44
GALNT2	O'nyong nyong virus	ONNV	0	1.05	1.05
GALNT2	influenza A virus	FLUAV	0	-1.63	1.63
GALNT2	Newcastle disease virus	NDV	0	-2.16	2.16
GALNT2	human metapneumovirus	HMPV	0	-0.06	0.06



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GALNT2	respiratory syncytial virus	RSV	0	-1.16	1.16
GALNT2	bunyamwera virus	BUNV	0	-1.41	1.41
GBP1	vaccinia virus	VV	0	0.34	0.34
GBP1	coxsackie B virus	CVB	0	0.54	0.54
GBP1	poliovirus	PV	0	-0.11	0.11
GBP1	equine arterivirus	EAV	0	-0.84	0.84
GBP1	Sindbis virus Girdwood	SINV-G	0	0.49	0.49
GBP1	Sindbis virus AR86	SINV-A	0	0.16	0.16
GBP1	O'nyong nyong virus	ONNV	0	0.44	0.44
GBP1	human parainfluenza virus type 3	PIV3	0	1.06	1.06
GBP1	Newcastle disease virus	NDV	0	-0.62	0.62
GBP1	human metapneumovirus	HMPV	0	-2.01	2.01
GBP1	measles virus	MV	0	0.5	0.5
GBP1	bunyamwera virus	BUNV	0	1.86	1.86
GBP3	coxsackie B virus	CVB	0	-1.39	1.39
GBP3	poliovirus	PV	0	-0.24	0.24
GBP3	equine arterivirus	EAV	0	-0.2	0.2
GBP3	Sindbis virus Girdwood	SINV-G	0	0.04	0.04
GBP3	Sindbis virus AR86	SINV-A	0	0.34	0.34
GBP3	O'nyong nyong virus	ONNV	0	-0.34	0.34
GBP3	human parainfluenza virus type 3	PIV3	0	0.5	0.5
GBP3	Newcastle disease virus	NDV	0	0.94	0.94
GBP3	human metapneumovirus	HMPV	0		
GBP3	measles virus	MV	0	-2.69	2.69
GBP3	bunyamwera virus	BUNV	0	-0.52	0.52
GCA	equine arterivirus	EAV	0	-0.13	0.13
GCA	O'nyong nyong virus	ONNV	0	-0.47	0.47
GZMB	coxsackie B virus	CVB	0	0.71	0.71
GZMB	poliovirus	PV	0	0.24	0.24
GZMB	equine arterivirus	EAV	0	-0.18	0.18
GZMB	Sindbis virus Girdwood	SINV-G	0	-0.33	0.33
GZMB	Sindbis virus AR86	SINV-A	0	0.34	0.34
GZMB	O'nyong nyong virus	ONNV	0	0.61	0.61
GZMB	Newcastle disease virus	NDV	0	-0.03	0.03
GZMB	human metapneumovirus	HMPV	0	1.14	1.14
GZMB	bunyamwera virus	BUNV	0	0.86	0.86
HES4	vaccinia virus	VV	0	0.56	0.56
HES4	coxsackie B virus	CVB	0	-0.61	0.61
HES4	poliovirus	PV	0	-0.1	0.1
HES4	equine arterivirus	EAV	0	-1.23	1.23
HES4	Sindbis virus Girdwood	SINV-G	0	-1.31	1.31
HES4	Sindbis virus AR86	SINV-A	0	-2.32	2.32
HES4	O'nyong nyong virus	ONNV	0	-2.59	2.59
HES4	influenza A virus	FLUAV	0	-0.49	0.49
HES4	human parainfluenza virus type 3	PIV3	0	-0.43	0.43
HES4	Newcastle disease virus	NDV	0	1.26	1.26
HES4	human metapneumovirus	HMPV	0	-0.44	0.44
HES4	respiratory syncytial virus	RSV	0	-0.56	0.56
HES4	measles virus	MV	0	-0.07	0.07
HES4	bunyamwera virus	BUNV	0	-0.01	0.01
HPSE	vaccinia virus	VV	0	-1.89	1.89
HPSE	coxsackie B virus	CVB	0	0.92	0.92
HPSE	poliovirus	PV	0	0.34	0.34
HPSE	equine arterivirus	EAV	0	-3.29	3.29
HPSE	Sindbis virus Girdwood	SINV-G	0	-2.49	2.49
HPSE	Sindbis virus AR86	SINV-A	0	-1.54	1.54
HPSE	O'nyong nyong virus	ONNV	0	-1.41	1.41
HPSE	influenza A virus	FLUAV	0	0.43	0.43

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HPSE	Newcastle disease virus	NDV	0	1.28	1.28
HPSE	human metapneumovirus	HMPV	0	-3.36	3.36
HPSE	respiratory syncytial virus	RSV	0	-4.19	4.19
HPSE	bunyamwera virus	BUNV	0	-2.85	2.85
IFI6	coxsackie B virus	CVB	0	-1.81	1.81
IFI6	poliovirus	PV	0	-1.02	1.02
IFI6	equine arterivirus	EAV	0	-1.04	1.04
IFI6	Sindbis virus Girdwood	SINV-G	0	-0.14	0.14
IFI6	Sindbis virus AR86	SINV-A	0	0.49	0.49
IFI6	O'nyong nyong virus	ONNV	0	-0.83	0.83
IFI6	human parainfluenza virus type 3	PIV3	0	0.33	0.33
IFI6	Newcastle disease virus	NDV	0	0.98	0.98
IFI6	human metapneumovirus	HMPV	0	-1.82	1.82
IFI6	measles virus	MV	0	0.89	0.89
IFI6	bunyamwera virus	BUNV	0	2.16	2.16
IFIH1	vaccinia virus	VV	0		
IFIH1	coxsackie B virus	CVB	0		
IFIH1	poliovirus	PV	0		
IFIH1	equine arterivirus	EAV	0	-1.46	1.46
IFIH1	Sindbis virus Girdwood	SINV-G	0	-1.4	1.4
IFIH1	Sindbis virus AR86	SINV-A	0	-1.33	1.33
IFIH1	O'nyong nyong virus	ONNV	0		
IFIH1	Newcastle disease virus	NDV	0	-1.08	1.08
IFIH1	respiratory syncytial virus	RSV	0	1.28	1.28
IFIH1	bunyamwera virus	BUNV	0		
IFIT1	coxsackie B virus	CVB	0	-0.63	0.63
IFIT1	equine arterivirus	EAV	0	-0.16	0.16
IFIT1	Sindbis virus Girdwood	SINV-G	0	-2.49	2.49
IFIT1	O'nyong nyong virus	ONNV	0	0.57	0.57
IFIT1	Newcastle disease virus	NDV	0	0.7	0.7
IFIT2	coxsackie B virus	CVB	0	-0.62	0.62
IFIT2	poliovirus	PV	0	-0.23	0.23
IFIT2	equine arterivirus	EAV	0	0.3	0.3
IFIT2	Sindbis virus Girdwood	SINV-G	0	0.27	0.27
IFIT2	O'nyong nyong virus	ONNV	0	-0.1	0.1
IFIT2	human parainfluenza virus type 3	PIV3	0	-1.55	1.55
IFIT2	Newcastle disease virus	NDV	0	2.23	2.23
IFIT2	human metapneumovirus	HMPV	0	0.72	0.72
IFIT2	bunyamwera virus	BUNV	0	-0.79	0.79
IFIT5	coxsackie B virus	CVB	0	0.74	0.74
IFIT5	poliovirus	PV	0	0.27	0.27
IFIT5	equine arterivirus	EAV	0	0.15	0.15
IFIT5	Sindbis virus Girdwood	SINV-G	0	-0.15	0.15
IFIT5	Sindbis virus AR86	SINV-A	0	-0.99	0.99
IFIT5	O'nyong nyong virus	ONNV	0	0.54	0.54
IFIT5	human parainfluenza virus type 3	PIV3	0	0.2	0.2
IFIT5	Newcastle disease virus	NDV	0	-0.02	0.02
IFIT5	human metapneumovirus	HMPV	0	2.15	2.15
IFIT5	measles virus	MV	0	0.74	0.74
IFIT5	bunyamwera virus	BUNV	0	0.27	0.27
IFITM2	coxsackie B virus	CVB	0	0.61	0.61
IFITM2	poliovirus	PV	0	-0.23	0.23
IFITM2	equine arterivirus	EAV	0	1.18	1.18
IFITM2	Sindbis virus Girdwood	SINV-G	0	0.01	0.01
IFITM2	Sindbis virus AR86	SINV-A	0	-1.26	1.26
IFITM2	O'nyong nyong virus	ONNV	0	-0.88	0.88
IFITM2	human parainfluenza virus type 3	PIV3	0	-1.07	1.07
IFITM2	human metapneumovirus	HMPV	0	-1.6	1.6

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IFITM2	respiratory syncytial virus	RSV	0	-0.04	0.04
IFITM2	measles virus	MV	0	0.6	0.6
IFITM2	bunyamwera virus	BUNV	0	0.56	0.56
IFITM3	coxsackie B virus	CVB	0	-0.98	0.98
IFITM3	poliovirus	PV	0	-0.13	0.13
IFITM3	equine arterivirus	EAV	0	0.98	0.98
IFITM3	Sindbis virus Girdwood	SINV-G	0	-2.09	2.09
IFITM3	Sindbis virus AR86	SINV-A	0	-1.12	1.12
IFITM3	O'nyong nyong virus	ONNV	0	-2.89	2.89
IFITM3	human parainfluenza virus type 3	PIV3	0	-1.28	1.28
IFITM3	measles virus	MV	0	-1.33	1.33
IFITM3	bunyamwera virus	BUNV	0	-3.75	3.75
IL6ST	coxsackie B virus	CVB	0	1.18	1.18
IL6ST	poliovirus	PV	0	-1.05	1.05
IL6ST	equine arterivirus	EAV	0		
IL6ST	Sindbis virus Girdwood	SINV-G	0	1.39	1.39
IL6ST	Sindbis virus AR86	SINV-A	0		
IL6ST	O'nyong nyong virus	ONNV	0	0.44	0.44
IL6ST	human parainfluenza virus type 3	PIV3	0	0.64	0.64
IL6ST	Newcastle disease virus	NDV	0	2.06	2.06
IL6ST	human metapneumovirus	HMPV	0	0.3	0.3
IL6ST	respiratory syncytial virus	RSV	0	1.19	1.19
IL6ST	measles virus	MV	0	-2.21	2.21
IL6ST	bunyamwera virus	BUNV	0	1.01	1.01
IMPA2	coxsackie B virus	CVB	0	-0.59	0.59
IMPA2	poliovirus	PV	0	0.16	0.16
IMPA2	equine arterivirus	EAV	0	1.05	1.05
IMPA2	Sindbis virus Girdwood	SINV-G	0	-0.08	0.08
IMPA2	Sindbis virus AR86	SINV-A	0	0.17	0.17
IMPA2	O'nyong nyong virus	ONNV	0	-1.02	1.02
IMPA2	influenza A virus	FLUAV	0	-0.55	0.55
IMPA2	human parainfluenza virus type 3	PIV3	0	-1.14	1.14
IMPA2	Newcastle disease virus	NDV	0	1.09	1.09
IMPA2	human metapneumovirus	HMPV	0	-0.38	0.38
IMPA2	respiratory syncytial virus	RSV	0	0.35	0.35
IMPA2	measles virus	MV	0	-0.22	0.22
IMPA2	bunyamwera virus	BUNV	0	1.07	1.07
INDO	poliovirus	PV	0	0.75	0.75
INDO	equine arterivirus	EAV	0	3.03	3.03
INDO	Sindbis virus Girdwood	SINV-G	0	2.05	2.05
INDO	Sindbis virus AR86	SINV-A	0		
INDO	O'nyong nyong virus	ONNV	0	1.01	1.01
INDO	human parainfluenza virus type 3	PIV3	0	-0.01	0.01
INDO	human metapneumovirus	HMPV	0	-1.47	1.47
INDO	bunyamwera virus	BUNV	0		
IRF1	coxsackie B virus	CVB	0	-3.64	3.64
IRF1	poliovirus	PV	0	-6.22	6.22
IRF1	equine arterivirus	EAV	0	-3.58	3.58
IRF1	Sindbis virus Girdwood	SINV-G	0	-4.3	4.3
IRF1	Sindbis virus AR86	SINV-A	0	-5.1	5.1
IRF1	O'nyong nyong virus	ONNV	0	-3.69	3.69
IRF1	Newcastle disease virus	NDV	0	-2.65	2.65
IRF1	bunyamwera virus	BUNV	0	-3.28	3.28
IRF2	coxsackie B virus	CVB	0	0.22	0.22
IRF2	poliovirus	PV	0	-0.2	0.2
IRF2	equine arterivirus	EAV	0	-3.12	3.12
IRF2	Sindbis virus Girdwood	SINV-G	0	-2.37	2.37
IRF2	Sindbis virus AR86	SINV-A	0	-2.39	2.39

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IRF2	O'nyong nyong virus	ONNV	0	-3.08	3.08
IRF2	Newcastle disease virus	NDV	0	0.11	0.11
IRF2	human metapneumovirus	HMPV	0	-1.34	1.34
IRF2	respiratory syncytial virus	RSV	0	-2.14	2.14
IRF2	bunyamwera virus	BUNV	0	-1.62	1.62
IRF7	equine arterivirus	EAV	0	-1.8	1.8
IRF7	Sindbis virus Girdwood	SINV-G	0	-2.44	2.44
IRF7	Sindbis virus AR86	SINV-A	0	-2.24	2.24
IRF7	O'nyong nyong virus	ONNV	0	-0.76	0.76
IRF7	bunyamwera virus	BUNV	0	-0.69	0.69
IRF9	vaccinia virus	VV	0	0.32	0.32
IRF9	coxsackie B virus	CVB	0	1.25	1.25
IRF9	poliovirus	PV	0	0	0
IRF9	equine arterivirus	EAV	0	1.68	1.68
IRF9	Sindbis virus Girdwood	SINV-G	0	1.83	1.83
IRF9	Sindbis virus AR86	SINV-A	0		
IRF9	O'nyong nyong virus	ONNV	0	0.47	0.47
IRF9	human metapneumovirus	HMPV	0	1.04	1.04
ISG20	vaccinia virus	VV	0	2.35	2.35
ISG20	coxsackie B virus	CVB	0	0.71	0.71
ISG20	poliovirus	PV	0	1.66	1.66
ISG20	equine arterivirus	EAV	0	-0.55	0.55
ISG20	Sindbis virus Girdwood	SINV-G	0	0.73	0.73
ISG20	Sindbis virus AR86	SINV-A	0	0.61	0.61
ISG20	O'nyong nyong virus	ONNV	0	0.3	0.3
ISG20	Newcastle disease virus	NDV	0	-0.62	0.62
ISG20	human metapneumovirus	HMPV	0	-0.39	0.39
ISG20	bunyamwera virus	BUNV	0	0.16	0.16
JUNB	coxsackie B virus	CVB	0	0.01	0.01
JUNB	poliovirus	PV	0	0.68	0.68
JUNB	equine arterivirus	EAV	0	0.08	0.08
JUNB	Sindbis virus Girdwood	SINV-G	0		
JUNB	Sindbis virus AR86	SINV-A	0	-1.52	1.52
JUNB	O'nyong nyong virus	ONNV	0	-2.26	2.26
JUNB	Newcastle disease virus	NDV	0	2.17	2.17
JUNB	human metapneumovirus	HMPV	0	0.46	0.46
JUNB	bunyamwera virus	BUNV	0	0.37	0.37
KIAA1618	vaccinia virus	VV	0	0.52	0.52
KIAA1618	coxsackie B virus	CVB	0	1.51	1.51
KIAA1618	poliovirus	PV	0	0.21	0.21
KIAA1618	equine arterivirus	EAV	0		
KIAA1618	Sindbis virus Girdwood	SINV-G	0	0.88	0.88
KIAA1618	Sindbis virus AR86	SINV-A	0	-2.42	2.42
KIAA1618	O'nyong nyong virus	ONNV	0	0.8	0.8
KIAA1618	influenza A virus	FLUAV	0	0.02	0.02
KIAA1618	human parainfluenza virus type 3	PIV3	0	-0.36	0.36
KIAA1618	Newcastle disease virus	NDV	0	-1.64	1.64
KIAA1618	human metapneumovirus	HMPV	0	-0.47	0.47
KIAA1618	respiratory syncytial virus	RSV	0	1.15	1.15
KIAA1618	measles virus	MV	0	-0.81	0.81
KIAA1618	bunyamwera virus	BUNV	0	1.35	1.35
LEPR	vaccinia virus	VV	0	-1.16	1.16
LEPR	coxsackie B virus	CVB	0	-2.24	2.24
LEPR	poliovirus	PV	0		
LEPR	equine arterivirus	EAV	0	-0.71	0.71
LEPR	Sindbis virus Girdwood	SINV-G	0	0.14	0.14
LEPR	Sindbis virus AR86	SINV-A	0	0.68	0.68
LEPR	O'nyong nyong virus	ONNV	0	0.61	0.61

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LEPR	human parainfluenza virus type 3	PIV3	0	0.37	0.37
LEPR	Newcastle disease virus	NDV	0	-0.67	0.67
LEPR	human metapneumovirus	HMPV	0	1.33	1.33
LEPR	respiratory syncytial virus	RSV	0	-0.34	0.34
LEPR	measles virus	MV	0	-1.59	1.59
LEPR	bunyamwera virus	BUNV	0		
LY6E	coxsackie B virus	CVB	0	0.68	0.68
LY6E	equine arterivirus	EAV	0	0.04	0.04
LY6E	Sindbis virus Girdwood	SINV-G	0	0.41	0.41
LY6E	Sindbis virus AR86	SINV-A	0	1.53	1.53
LY6E	O'nyong nyong virus	ONNV	0		
LY6E	human parainfluenza virus type 3	PIV3	0	-1.07	1.07
LY6E	Newcastle disease virus	NDV	0	0.79	0.79
LY6E	human metapneumovirus	HMPV	0	-0.27	0.27
LY6E	measles virus	MV	0	-1.32	1.32
LY6E	bunyamwera virus	BUNV	0	-0.75	0.75
MAFB	vaccinia virus	VV	0	0.59	0.59
MAFB	coxsackie B virus	CVB	0	1.89	1.89
MAFB	equine arterivirus	EAV	0	2.6	2.6
MAFB	Sindbis virus Girdwood	SINV-G	0	1.43	1.43
MAFB	Sindbis virus AR86	SINV-A	0	1.3	1.3
MAFB	O'nyong nyong virus	ONNV	0		
MAFB	Newcastle disease virus	NDV	0	0.52	0.52
MAFB	human metapneumovirus	HMPV	0	0.75	0.75
MAFB	bunyamwera virus	BUNV	0	0.31	0.31
MAP3K14	coxsackie B virus	CVB	0		
MAP3K14	poliovirus	PV	0		
MAP3K14	equine arterivirus	EAV	0	-2.31	2.31
MAP3K14	Sindbis virus Girdwood	SINV-G	0	-3.09	3.09
MAP3K14	Sindbis virus AR86	SINV-A	0	-3.4	3.4
MAP3K14	O'nyong nyong virus	ONNV	0	-2.73	2.73
MAP3K14	Newcastle disease virus	NDV	0	-2.14	2.14
MAP3K14	human metapneumovirus	HMPV	0	-1.05	1.05
MAP3K14	bunyamwera virus	BUNV	0	-1.45	1.45
MAP3K5	vaccinia virus	VV	0	0.27	0.27
MAP3K5	coxsackie B virus	CVB	0	2.59	2.59
MAP3K5	poliovirus	PV	0	4.18	4.18
MAP3K5	equine arterivirus	EAV	0	0.33	0.33
MAP3K5	Sindbis virus Girdwood	SINV-G	0	-0.17	0.17
MAP3K5	Sindbis virus AR86	SINV-A	0	-0.83	0.83
MAP3K5	O'nyong nyong virus	ONNV	0	-0.05	0.05
MAP3K5	Newcastle disease virus	NDV	0	-0.06	0.06
MAP3K5	respiratory syncytial virus	RSV	0	1.98	1.98
MAP3K5	bunyamwera virus	BUNV	0	-0.8	0.8
MARCKS	vaccinia virus	VV	0	-0.48	0.48
MARCKS	coxsackie B virus	CVB	0	1.31	1.31
MARCKS	equine arterivirus	EAV	0		
MARCKS	Sindbis virus Girdwood	SINV-G	0	1.16	1.16
MARCKS	Sindbis virus AR86	SINV-A	0		
MARCKS	O'nyong nyong virus	ONNV	0	0.76	0.76
MARCKS	human parainfluenza virus type 3	PIV3	0	-1.32	1.32
MARCKS	Newcastle disease virus	NDV	0	1.97	1.97
MARCKS	human metapneumovirus	HMPV	0	-0.67	0.67
MARCKS	respiratory syncytial virus	RSV	0	-0.12	0.12
MARCKS	measles virus	MV	0	-1.93	1.93
MARCKS	bunyamwera virus	BUNV	0	0.06	0.06
MAX	equine arterivirus	EAV	0	-0.57	0.57

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MAX	Sindbis virus Girdwood	SINV-G	0	0.27	0.27
MAX	Sindbis virus AR86	SINV-A	0	-0.38	0.38
MCOLN2	vaccinia virus	VV	0	0.21	0.21
MCOLN2	coxsackie B virus	CVB	0	3.64	3.64
MCOLN2	poliovirus	PV	0	-1.17	1.17
MCOLN2	equine arterivirus	EAV	0		
MCOLN2	Sindbis virus Girdwood	SINV-G	0	0.26	0.26
MCOLN2	Sindbis virus AR86	SINV-A	0	-1.07	1.07
MCOLN2	O'nyong nyong virus	ONNV	0	-0.61	0.61
MCOLN2	influenza A virus	FLUAV	0	2.33	2.33
MCOLN2	human parainfluenza virus type 3	PIV3	0	-0.2	0.2
MCOLN2	Newcastle disease virus	NDV	0	0.89	0.89
MCOLN2	human metapneumovirus	HMPV	0	-0.12	0.12
MCOLN2	respiratory syncytial virus	RSV	0	0.61	0.61
MCOLN2	measles virus	MV	0	-0.5	0.5
MCOLN2	bunyamwera virus	BUNV	0	0.9	0.9
MICB	coxsackie B virus	CVB	0	-1.09	1.09
MICB	equine arterivirus	EAV	0	-1.83	1.83
MICB	Sindbis virus Girdwood	SINV-G	0	-1.85	1.85
MICB	Sindbis virus AR86	SINV-A	0	-1.37	1.37
MICB	O'nyong nyong virus	ONNV	0	-0.77	0.77
MICB	human parainfluenza virus type 3	PIV3	0	-0.72	0.72
MICB	Newcastle disease virus	NDV	0	-0.41	0.41
MICB	measles virus	MV	0	-0.74	0.74
MICB	bunyamwera virus	BUNV	0	0.37	0.37
MKX	coxsackie B virus	CVB	0	-3.34	3.34
MKX	poliovirus	PV	0	-0.51	0.51
MKX	equine arterivirus	EAV	0	1.41	1.41
MKX	Sindbis virus Girdwood	SINV-G	0		
MKX	Sindbis virus AR86	SINV-A	0	0.92	0.92
MKX	O'nyong nyong virus	ONNV	0	-0.34	0.34
MKX	influenza A virus	FLUAV	0	1.72	1.72
MKX	human parainfluenza virus type 3	PIV3	0	3.23	3.23
MKX	Newcastle disease virus	NDV	0	-1.02	1.02
MKX	human metapneumovirus	HMPV	0	0.7	0.7
MKX	respiratory syncytial virus	RSV	0	0.73	0.73
MKX	measles virus	MV	0	1.36	1.36
MKX	bunyamwera virus	BUNV	0	0.39	0.39
MT1G	vaccinia virus	VV	0	-0.03	0.03
MT1G	coxsackie B virus	CVB	0	-0.61	0.61
MT1G	equine arterivirus	EAV	0	0.02	0.02
MT1G	Sindbis virus Girdwood	SINV-G	0	0.1	0.1
MT1G	Sindbis virus AR86	SINV-A	0	0.12	0.12
MT1G	O'nyong nyong virus	ONNV	0	-1.74	1.74
MT1G	influenza A virus	FLUAV	0	-0.85	0.85
MT1G	human parainfluenza virus type 3	PIV3	0	2.02	2.02
MT1G	Newcastle disease virus	NDV	0	1.47	1.47
MT1G	human metapneumovirus	HMPV	0	1.45	1.45
MT1G	respiratory syncytial virus	RSV	0	-0.71	0.71
MT1G	measles virus	MV	0	1.04	1.04
MT1G	bunyamwera virus	BUNV	0	0.27	0.27
MX1	equine arterivirus	EAV	0	1.03	1.03
MX1	Sindbis virus Girdwood	SINV-G	0	-0.27	0.27
MX1	Sindbis virus AR86	SINV-A	0	0.79	0.79
MX1	O'nyong nyong virus	ONNV	0	-0.93	0.93
MYD88	Sindbis virus Girdwood	SINV-G	0	-2.12	2.12
MYD88	O'nyong nyong virus	ONNV	0	-3.23	3.23
N4BP1	vaccinia virus	VV	0		

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N4BP1	coxsackie B virus	CVB	0		
N4BP1	poliovirus	PV	0		
N4BP1	equine arterivirus	EAV	0	1.53	1.53
N4BP1	Sindbis virus Girdwood	SINV-G	0	2.4	2.4
N4BP1	Sindbis virus AR86	SINV-A	0		
N4BP1	O'nyong nyong virus	ONNV	0		
N4BP1	influenza A virus	FLUAV	0		
N4BP1	human parainfluenza virus type 3	PIV3	0		
N4BP1	Newcastle disease virus	NDV	0	2.24	2.24
N4BP1	human metapneumovirus	HMPV	0		
N4BP1	respiratory syncytial virus	RSV	0		
N4BP1	measles virus	MV	0		
N4BP1	bunyamwera virus	BUNV	0		
NCF1	vaccinia virus	VV	0	0.03	0.03
NCF1	coxsackie B virus	CVB	0	-0.81	0.81
NCF1	poliovirus	PV	0	-0.1	0.1
NCF1	equine arterivirus	EAV	0	-0.02	0.02
NCF1	Sindbis virus Girdwood	SINV-G	0	0.35	0.35
NCF1	Sindbis virus AR86	SINV-A	0	-0.22	0.22
NCF1	O'nyong nyong virus	ONNV	0	-0.47	0.47
NCF1	human parainfluenza virus type 3	PIV3	0	-0.15	0.15
NCF1	Newcastle disease virus	NDV	0	2.38	2.38
NCF1	human metapneumovirus	HMPV	0	1.27	1.27
NCF1	measles virus	MV	0	-0.74	0.74
NCF1	bunyamwera virus	BUNV	0		
NCOA3	vaccinia virus	VV	0		
NCOA3	coxsackie B virus	CVB	0		
NCOA3	poliovirus	PV	0		
NCOA3	equine arterivirus	EAV	0	0.24	0.24
NCOA3	Sindbis virus Girdwood	SINV-G	0	1.29	1.29
NCOA3	Sindbis virus AR86	SINV-A	0		
NCOA3	O'nyong nyong virus	ONNV	0	0.2	0.2
NCOA3	human parainfluenza virus type 3	PIV3	0	-1.22	1.22
NCOA3	Newcastle disease virus	NDV	0	-0.43	0.43
NCOA3	human metapneumovirus	HMPV	0	-0.74	0.74
NCOA3	respiratory syncytial virus	RSV	0	-1.46	1.46
NCOA3	measles virus	MV	0	-2.08	2.08
NCOA3	bunyamwera virus	BUNV	0	-1.01	1.01
NFIL3	vaccinia virus	VV	0	-4.29	4.29
NFIL3	coxsackie B virus	CVB	0	0.9	0.9
NFIL3	equine arterivirus	EAV	0	0.15	0.15
NFIL3	Sindbis virus Girdwood	SINV-G	0	0.24	0.24
NFIL3	Sindbis virus AR86	SINV-A	0	0.57	0.57
NFIL3	O'nyong nyong virus	ONNV	0	0.76	0.76
NFIL3	influenza A virus	FLUAV	0	0.51	0.51
NFIL3	human parainfluenza virus type 3	PIV3	0	0.46	0.46
NFIL3	Newcastle disease virus	NDV	0	-0.88	0.88
NFIL3	human metapneumovirus	HMPV	0	-0.08	0.08
NFIL3	bunyamwera virus	BUNV	0	1.07	1.07
NPAS2	vaccinia virus	VV	0	-2.05	2.05
NPAS2	coxsackie B virus	CVB	0	-1.61	1.61
NPAS2	poliovirus	PV	0	0.14	0.14
NPAS2	equine arterivirus	EAV	0	2.27	2.27
NPAS2	Sindbis virus Girdwood	SINV-G	0	1.55	1.55
NPAS2	Sindbis virus AR86	SINV-A	0		
NPAS2	O'nyong nyong virus	ONNV	0	0.02	0.02
NPAS2	Newcastle disease virus	NDV	0	1.14	1.14

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NPAS2	human metapneumovirus	HMPV	0	1.98	1.98
NPAS2	respiratory syncytial virus	RSV	0	2.14	2.14
NPAS2	bunyamwera virus	BUNV	0	-0.75	0.75
NT5C3	vaccinia virus	VV	0	-0.65	0.65
NT5C3	coxsackie B virus	CVB	0	-1.31	1.31
NT5C3	poliovirus	PV	0	-1.23	1.23
NT5C3	equine arterivirus	EAV	0	-0.22	0.22
NT5C3	Sindbis virus Girdwood	SINV-G	0	0.69	0.69
NT5C3	Sindbis virus AR86	SINV-A	0	0.8	0.8
NT5C3	O'nyong nyong virus	ONNV	0	-2.08	2.08
NT5C3	influenza A virus	FLUAV	0	-0.16	0.16
NT5C3	human parainfluenza virus type 3	PIV3	0	0.91	0.91
NT5C3	Newcastle disease virus	NDV	0	0.34	0.34
NT5C3	human metapneumovirus	HMPV	0	1.31	1.31
NT5C3	respiratory syncytial virus	RSV	0	0.28	0.28
NT5C3	measles virus	MV	0	0.22	0.22
NT5C3	bunyamwera virus	BUNV	0	-0.01	0.01
OAS1	coxsackie B virus	CVB	0		
OAS1	Sindbis virus Girdwood	SINV-G	0	1.23	1.23
OAS1	Sindbis virus AR86	SINV-A	0		
OAS1	O'nyong nyong virus	ONNV	0	1.09	1.09
OAS1	Newcastle disease virus	NDV	0	-0.72	0.72
OAS1	human metapneumovirus	HMPV	0	-0.76	0.76
OAS2	coxsackie B virus	CVB	0	0.4	0.4
OAS2	Sindbis virus Girdwood	SINV-G	0	0.22	0.22
OAS2	Sindbis virus AR86	SINV-A	0	0.68	0.68
OAS2	O'nyong nyong virus	ONNV	0	1.02	1.02
OAS2	human parainfluenza virus type 3	PIV3	0	0.74	0.74
OAS2	Newcastle disease virus	NDV	0	0.41	0.41
OAS2	human metapneumovirus	HMPV	0	-0.73	0.73
OAS2	measles virus	MV	0	0.43	0.43
OASL	coxsackie B virus	CVB	0	0.09	0.09
OASL	poliovirus	PV	0	-1.58	1.58
OASL	equine arterivirus	EAV	0	-1.7	1.7
OASL	Sindbis virus Girdwood	SINV-G	0	-0.35	0.35
OASL	Sindbis virus AR86	SINV-A	0	0.16	0.16
OASL	O'nyong nyong virus	ONNV	0	0.49	0.49
OASL	Newcastle disease virus	NDV	0	-2.07	2.07
OASL	human metapneumovirus	HMPV	0	-0.81	0.81
OASL	bunyamwera virus	BUNV	0	0.5	0.5
OGFR	vaccinia virus	VV	0	-0.21	0.21
OGFR	coxsackie B virus	CVB	0	-0.84	0.84
OGFR	poliovirus	PV	0	0.17	0.17
OGFR	equine arterivirus	EAV	0	-1.13	1.13
OGFR	Sindbis virus Girdwood	SINV-G	0	-0.85	0.85
OGFR	Sindbis virus AR86	SINV-A	0	-0.56	0.56
OGFR	O'nyong nyong virus	ONNV	0	-0.36	0.36
OGFR	influenza A virus	FLUAV	0	-1.59	1.59
OGFR	human parainfluenza virus type 3	PIV3	0	-1.73	1.73
OGFR	Newcastle disease virus	NDV	0	0.51	0.51
OGFR	human metapneumovirus	HMPV	0	0.21	0.21
OGFR	respiratory syncytial virus	RSV	0	-1.56	1.56
OGFR	measles virus	MV	0	-2.39	2.39
OGFR	bunyamwera virus	BUNV	0	1.65	1.65
P2RY6	vaccinia virus	VV	0	0.79	0.79
P2RY6	coxsackie B virus	CVB	0	0.02	0.02
P2RY6	poliovirus	PV	0	-0.16	0.16
P2RY6	equine arterivirus	EAV	0	-3.26	3.26



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P2RY6	Sindbis virus Girdwood	SINV-G	0	-3.14	3.14
P2RY6	Sindbis virus AR86	SINV-A	0	0.07	0.07
P2RY6	O'nyong nyong virus	ONNV	0	-2.15	2.15
P2RY6	influenza A virus	FLUAV	0	0.97	0.97
P2RY6	Newcastle disease virus	NDV	0	0.68	0.68
P2RY6	human metapneumovirus	HMPV	0	-2.65	2.65
P2RY6	respiratory syncytial virus	RSV	0	-1.65	1.65
P2RY6	bunyamwera virus	BUNV	0	1.6	1.6
PARP12	vaccinia virus	VV	0	0.12	0.12
PARP12	coxsackie B virus	CVB	0	1.62	1.62
PARP12	poliovirus	PV	0	2.27	2.27
PARP12	equine arterivirus	EAV	0		
PARP12	Sindbis virus Girdwood	SINV-G	0	1.3	1.3
PARP12	Sindbis virus AR86	SINV-A	0		
PARP12	O'nyong nyong virus	ONNV	0	0.51	0.51
PARP12	human parainfluenza virus type 3	PIV3	0	-0.77	0.77
PARP12	Newcastle disease virus	NDV	0	0.22	0.22
PARP12	human metapneumovirus	HMPV	0	-0.12	0.12
PARP12	respiratory syncytial virus	RSV	0	0.14	0.14
PARP12	measles virus	MV	0	-0.39	0.39
PARP12	bunyamwera virus	BUNV	0	0.46	0.46
PIM3	vaccinia virus	VV	0	3.57	3.57
PIM3	coxsackie B virus	CVB	0	2.5	2.5
PIM3	poliovirus	PV	0	1.52	1.52
PIM3	equine arterivirus	EAV	0	-1.74	1.74
PIM3	Sindbis virus Girdwood	SINV-G	0	1.34	1.34
PIM3	Sindbis virus AR86	SINV-A	0		
PIM3	O'nyong nyong virus	ONNV	0	-0.49	0.49
PIM3	Newcastle disease virus	NDV	0	-0.37	0.37
PIM3	human metapneumovirus	HMPV	0	-1.62	1.62
PIM3	respiratory syncytial virus	RSV	0	-1.19	1.19
PIM3	measles virus	MV	0	0.39	0.39
PIM3	bunyamwera virus	BUNV	0	1.6	1.6
PSMB8	coxsackie B virus	CVB	0	0.52	0.52
PSMB8	poliovirus	PV	0	0.33	0.33
PSMB8	equine arterivirus	EAV	0	-0.62	0.62
PSMB8	Sindbis virus Girdwood	SINV-G	0	-0.1	0.1
PSMB8	Sindbis virus AR86	SINV-A	0	-0.3	0.3
PSMB8	O'nyong nyong virus	ONNV	0	0.51	0.51
PSMB8	influenza A virus	FLUAV	0	-0.19	0.19
PSMB8	human parainfluenza virus type 3	PIV3	0	-0.24	0.24
PSMB8	Newcastle disease virus	NDV	0	-1.05	1.05
PSMB8	human metapneumovirus	HMPV	0	-2.03	2.03
PSMB8	measles virus	MV	0	0.95	0.95
PSMB8	bunyamwera virus	BUNV	0	0.78	0.78
PSMB9	coxsackie B virus	CVB	0	0.81	0.81
PSMB9	poliovirus	PV	0	0.5	0.5
PSMB9	equine arterivirus	EAV	0	-1.15	1.15
PSMB9	Sindbis virus Girdwood	SINV-G	0	-0.94	0.94
PSMB9	Sindbis virus AR86	SINV-A	0	-1.07	1.07
PSMB9	O'nyong nyong virus	ONNV	0	0.49	0.49
PSMB9	human parainfluenza virus type 3	PIV3	0	-0.29	0.29
PSMB9	Newcastle disease virus	NDV	0	-1.52	1.52
PSMB9	human metapneumovirus	HMPV	0	-2.41	2.41
PSMB9	respiratory syncytial virus	RSV	0	-1.46	1.46
PSMB9	measles virus	MV	0	-0.8	0.8
PSMB9	bunyamwera virus	BUNV	0	-0.77	0.77
RARRES3	vaccinia virus	VV	0	-0.16	0.16

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RARRES3	coxsackie B virus	CVB	0	0.12	0.12
RARRES3	poliovirus	PV	0	-3.33	3.33
RARRES3	equine arterivirus	EAV	0	0.74	0.74
RARRES3	Sindbis virus Girdwood	SINV-G	0	-0.32	0.32
RARRES3	Sindbis virus AR86	SINV-A	0	0.12	0.12
RARRES3	O'nyong nyong virus	ONNV	0	0.78	0.78
RARRES3	human parainfluenza virus type 3	PIV3	0	-0.08	0.08
RARRES3	Newcastle disease virus	NDV	0	0.49	0.49
RARRES3	human metapneumovirus	HMPV	0	-0.54	0.54
RARRES3	respiratory syncytial virus	RSV	0	0.68	0.68
RARRES3	measles virus	MV	0	-1.37	1.37
RARRES3	bunyamwera virus	BUNV	0	-0.65	0.65
RBCK1	vaccinia virus	VV	0	-0.14	0.14
RBCK1	coxsackie B virus	CVB	0	-1.18	1.18
RBCK1	poliovirus	PV	0	0	0
RBCK1	equine arterivirus	EAV	0	-1.12	1.12
RBCK1	Sindbis virus Girdwood	SINV-G	0	-0.58	0.58
RBCK1	Sindbis virus AR86	SINV-A	0	0.12	0.12
RBCK1	O'nyong nyong virus	ONNV	0	-0.15	0.15
RBCK1	human parainfluenza virus type 3	PIV3	0	-1.28	1.28
RBCK1	Newcastle disease virus	NDV	0	0.68	0.68
RBCK1	human metapneumovirus	HMPV	0	1.23	1.23
RBCK1	respiratory syncytial virus	RSV	0	-0.73	0.73
RBCK1	measles virus	MV	0	-2.11	2.11
RBCK1	bunyamwera virus	BUNV	0	0.22	0.22
RGS1	vaccinia virus	VV	0	-2.66	2.66
RGS1	coxsackie B virus	CVB	0	-0.4	0.4
RGS1	poliovirus	PV	0	-0.39	0.39
RGS1	equine arterivirus	EAV	0	-0.44	0.44
RGS1	Sindbis virus Girdwood	SINV-G	0	0.58	0.58
RGS1	Sindbis virus AR86	SINV-A	0	-0.03	0.03
RGS1	O'nyong nyong virus	ONNV	0	-0.65	0.65
RGS1	human parainfluenza virus type 3	PIV3	0	-0.32	0.32
RGS1	Newcastle disease virus	NDV	0	-1.01	1.01
RGS1	human metapneumovirus	HMPV	0	0.7	0.7
RGS1	respiratory syncytial virus	RSV	0	-0.85	0.85
RGS1	measles virus	MV	0	0.41	0.41
RGS1	bunyamwera virus	BUNV	0	0.75	0.75
RTP4	vaccinia virus	VV	0	1.14	1.14
RTP4	coxsackie B virus	CVB	0	0.35	0.35
RTP4	poliovirus	PV	0	1.08	1.08
RTP4	equine arterivirus	EAV	0	1.12	1.12
RTP4	Sindbis virus Girdwood	SINV-G	0		
RTP4	Sindbis virus AR86	SINV-A	0	0.53	0.53
RTP4	O'nyong nyong virus	ONNV	0	1.11	1.11
RTP4	human parainfluenza virus type 3	PIV3	0	-0.05	0.05
RTP4	Newcastle disease virus	NDV	0	-0.27	0.27
RTP4	human metapneumovirus	HMPV	0	-0.98	0.98
RTP4	measles virus	MV	0		
RTP4	bunyamwera virus	BUNV	0	-0.6	0.6
SAMD4A	vaccinia virus	VV	0	0.52	0.52
SAMD4A	coxsackie B virus	CVB	0	0.03	0.03
SAMD4A	poliovirus	PV	0	1.53	1.53
SAMD4A	equine arterivirus	EAV	0	-1.45	1.45
SAMD4A	Sindbis virus Girdwood	SINV-G	0	-2.23	2.23
SAMD4A	Sindbis virus AR86	SINV-A	0	-2.13	2.13
SAMD4A	O'nyong nyong virus	ONNV	0	-3.79	3.79
SAMD4A	influenza A virus	FLUAV	0	0.58	0.58

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SAMD4A	human parainfluenza virus type 3	PIV3	0	-0.2	0.2
SAMD4A	Newcastle disease virus	NDV	0	-0.09	0.09
SAMD4A	human metapneumovirus	HMPV	0	-0.79	0.79
SAMD4A	respiratory syncytial virus	RSV	0	-1.98	1.98
SAMD4A	measles virus	MV	0	-0.76	0.76
SAMD4A	bunyamwera virus	BUNV	0	-0.12	0.12
SCARB2	vaccinia virus	VV	0	-3.19	3.19
SCARB2	coxsackie B virus	CVB	0	1.39	1.39
SCARB2	poliovirus	PV	0	0.63	0.63
SCARB2	equine arterivirus	EAV	0	0.55	0.55
SCARB2	Sindbis virus Girdwood	SINV-G	0	-0.47	0.47
SCARB2	Sindbis virus AR86	SINV-A	0	1.44	1.44
SCARB2	O'nyong nyong virus	ONNV	0		
SCARB2	human parainfluenza virus type 3	PIV3	0	-1.16	1.16
SCARB2	Newcastle disease virus	NDV	0	-0.85	0.85
SCARB2	human metapneumovirus	HMPV	0		
SCARB2	respiratory syncytial virus	RSV	0	0.21	0.21
SCARB2	measles virus	MV	0	-0.05	0.05
SCARB2	bunyamwera virus	BUNV	0	1.5	1.5
SCO2	vaccinia virus	VV	0	-0.24	0.24
SCO2	coxsackie B virus	CVB	0	0.09	0.09
SCO2	poliovirus	PV	0	0.03	0.03
SCO2	equine arterivirus	EAV	0	1.21	1.21
SCO2	Sindbis virus Girdwood	SINV-G	0		
SCO2	Sindbis virus AR86	SINV-A	0	0.38	0.38
SCO2	O'nyong nyong virus	ONNV	0	-2.6	2.6
SCO2	influenza A virus	FLUAV	0	1.54	1.54
SCO2	human parainfluenza virus type 3	PIV3	0	-1.25	1.25
SCO2	Newcastle disease virus	NDV	0	0.04	0.04
SCO2	human metapneumovirus	HMPV	0	1.04	1.04
SCO2	respiratory syncytial virus	RSV	0	-1.2	1.2
SCO2	measles virus	MV	0	1.08	1.08
SCO2	bunyamwera virus	BUNV	0	0.67	0.67
SERPINB9	vaccinia virus	VV	0	-0.12	0.12
SERPINB9	coxsackie B virus	CVB	0	0.78	0.78
SERPINB9	poliovirus	PV	0	0.09	0.09
SERPINB9	equine arterivirus	EAV	0	-0.44	0.44
SERPINB9	Sindbis virus Girdwood	SINV-G	0	-0.09	0.09
SERPINB9	Sindbis virus AR86	SINV-A	0	-0.2	0.2
SERPINB9	O'nyong nyong virus	ONNV	0	-0.5	0.5
SERPINB9	influenza A virus	FLUAV	0	0.38	0.38
SERPINB9	human parainfluenza virus type 3	PIV3	0	2.06	2.06
SERPINB9	Newcastle disease virus	NDV	0	0.14	0.14
SERPINB9	human metapneumovirus	HMPV	0	-1.2	1.2
SERPINB9	respiratory syncytial virus	RSV	0	-0.15	0.15
SERPINB9	measles virus	MV	0	-0.46	0.46
SERPINB9	bunyamwera virus	BUNV	0	-1.67	1.67
SLC15A3	vaccinia virus	VV	0	0.23	0.23
SLC15A3	coxsackie B virus	CVB	0	-0.95	0.95
SLC15A3	poliovirus	PV	0	0.76	0.76
SLC15A3	equine arterivirus	EAV	0	-0.16	0.16
SLC15A3	Sindbis virus Girdwood	SINV-G	0	-3	3
SLC15A3	Sindbis virus AR86	SINV-A	0	-3.6	3.6
SLC15A3	O'nyong nyong virus	ONNV	0	-1.9	1.9
SLC15A3	influenza A virus	FLUAV	0	1.26	1.26
SLC15A3	human parainfluenza virus type 3	PIV3	0	-0.15	0.15
SLC15A3	Newcastle disease virus	NDV	0	-0.17	0.17
SLC15A3	human metapneumovirus	HMPV	0	-1.41	1.41

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SLC15A3	respiratory syncytial virus	RSV	0	-0.56	0.56
SLC15A3	measles virus	MV	0	-1.09	1.09
SLC15A3	bunyamwera virus	BUNV	0	-0.28	0.28
SLC16A1	coxsackie B virus	CVB	0	-0.41	0.41
SLC16A1	poliovirus	PV	0	0.53	0.53
SLC16A1	equine arterivirus	EAV	0	0.39	0.39
SLC16A1	Sindbis virus Girdwood	SINV-G	0	-0.81	0.81
SLC16A1	Sindbis virus AR86	SINV-A	0	0.08	0.08
SLC16A1	O'nyong nyong virus	ONNV	0	0.76	0.76
SLC16A1	influenza A virus	FLUAV	0	-1.86	1.86
SLC16A1	human parainfluenza virus type 3	PIV3	0	-1.5	1.5
SLC16A1	Newcastle disease virus	NDV	0	-0.76	0.76
SLC16A1	human metapneumovirus	HMPV	0	-0.14	0.14
SLC16A1	respiratory syncytial virus	RSV	0	-1.22	1.22
SLC16A1	measles virus	MV	0	-2.71	2.71
SLC16A1	bunyamwera virus	BUNV	0	0.05	0.05
SOCS1	coxsackie B virus	CVB	0	0.51	0.51
SOCS1	equine arterivirus	EAV	0	0.19	0.19
SOCS1	Sindbis virus Girdwood	SINV-G	0	-0.91	0.91
SOCS1	Sindbis virus AR86	SINV-A	0	-0.88	0.88
SOCS1	O'nyong nyong virus	ONNV	0	1.01	1.01
SOCS1	human parainfluenza virus type 3	PIV3	0	-0.36	0.36
SOCS1	Newcastle disease virus	NDV	0	-0.08	0.08
SOCS1	human metapneumovirus	HMPV	0	-1.18	1.18
SOCS1	measles virus	MV	0	-0.05	0.05
SOCS1	bunyamwera virus	BUNV	0	-0.86	0.86
SPSB1	vaccinia virus	VV	0	-0.76	0.76
SPSB1	coxsackie B virus	CVB	0	0.83	0.83
SPSB1	poliovirus	PV	0	0.44	0.44
SPSB1	equine arterivirus	EAV	0	0	0
SPSB1	Sindbis virus Girdwood	SINV-G	0	1.29	1.29
SPSB1	Sindbis virus AR86	SINV-A	0		
SPSB1	O'nyong nyong virus	ONNV	0	-0.82	0.82
SPSB1	influenza A virus	FLUAV	0	-0.12	0.12
SPSB1	human parainfluenza virus type 3	PIV3	0	-0.72	0.72
SPSB1	Newcastle disease virus	NDV	0		
SPSB1	human metapneumovirus	HMPV	0	0	0
SPSB1	respiratory syncytial virus	RSV	0	-0.92	0.92
SPSB1	measles virus	MV	0	-0.29	0.29
SPSB1	bunyamwera virus	BUNV	0	2.03	2.03
STARD5	vaccinia virus	VV	0	-1.93	1.93
STARD5	coxsackie B virus	CVB	0	0.63	0.63
STARD5	poliovirus	PV	0	0.27	0.27
STARD5	equine arterivirus	EAV	0	-0.82	0.82
STARD5	Sindbis virus Girdwood	SINV-G	0	-2.9	2.9
STARD5	Sindbis virus AR86	SINV-A	0	-2.11	2.11
STARD5	O'nyong nyong virus	ONNV	0	-0.77	0.77
STARD5	influenza A virus	FLUAV	0	0.06	0.06
STARD5	human parainfluenza virus type 3	PIV3	0	-0.94	0.94
STARD5	Newcastle disease virus	NDV	0	-0.05	0.05
STARD5	human metapneumovirus	HMPV	0	-1.49	1.49
STARD5	respiratory syncytial virus	RSV	0	-0.64	0.64
STARD5	measles virus	MV	0	-0.96	0.96
STARD5	bunyamwera virus	BUNV	0	1.78	1.78
STAT2	coxsackie B virus	CVB	0	-0.61	0.61
STAT2	equine arterivirus	EAV	0	-1.39	1.39
STAT2	Sindbis virus Girdwood	SINV-G	0	-0.37	0.37
STAT2	O'nyong nyong virus	ONNV	0	-1.55	1.55

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STEAP4	vaccinia virus	VV	0	-0.66	0.66
STEAP4	coxsackie B virus	CVB	0	-0.58	0.58
STEAP4	equine arterivirus	EAV	0	0.83	0.83
STEAP4	Sindbis virus Girdwood	SINV-G	0	0.18	0.18
STEAP4	Sindbis virus AR86	SINV-A	0	0.23	0.23
STEAP4	O'nyong nyong virus	ONNV	0	0.69	0.69
STEAP4	influenza A virus	FLUAV	0	0.1	0.1
STEAP4	human parainfluenza virus type 3	PIV3	0	0.4	0.4
STEAP4	Newcastle disease virus	NDV	0	0.73	0.73
STEAP4	human metapneumovirus	HMPV	0	0.71	0.71
STEAP4	respiratory syncytial virus	RSV	0	1.42	1.42
STEAP4	measles virus	MV	0	0.61	0.61
STEAP4	bunyamwera virus	BUNV	0	2.29	2.29
TAGAP	vaccinia virus	VV	0	0.55	0.55
TAGAP	coxsackie B virus	CVB	0	0.46	0.46
TAGAP	poliovirus	PV	0	0.41	0.41
TAGAP	equine arterivirus	EAV	0	1.77	1.77
TAGAP	Sindbis virus Girdwood	SINV-G	0		
TAGAP	Sindbis virus AR86	SINV-A	0	0.35	0.35
TAGAP	O'nyong nyong virus	ONNV	0	-1.38	1.38
TAGAP	influenza A virus	FLUAV	0	-1.28	1.28
TAGAP	human parainfluenza virus type 3	PIV3	0	-1.34	1.34
TAGAP	Newcastle disease virus	NDV	0	2.71	2.71
TAGAP	human metapneumovirus	HMPV	0	1.57	1.57
TAGAP	respiratory syncytial virus	RSV	0	1.75	1.75
TAGAP	measles virus	MV	0	1.65	1.65
TAGAP	bunyamwera virus	BUNV	0	1.77	1.77
TBX3	vaccinia virus	VV	0	-1.35	1.35
TBX3	coxsackie B virus	CVB	0	-0.46	0.46
TBX3	poliovirus	PV	0	1.03	1.03
TBX3	equine arterivirus	EAV	0	1.1	1.1
TBX3	Sindbis virus Girdwood	SINV-G	0	1.1	1.1
TBX3	Sindbis virus AR86	SINV-A	0	0.5	0.5
TBX3	O'nyong nyong virus	ONNV	0	-2.5	2.5
TBX3	human parainfluenza virus type 3	PIV3	0	0.21	0.21
TBX3	Newcastle disease virus	NDV	0	0.28	0.28
TBX3	human metapneumovirus	HMPV	0	-0.03	0.03
TBX3	respiratory syncytial virus	RSV	0	-0.12	0.12
TBX3	measles virus	MV	0	-1.02	1.02
TBX3	bunyamwera virus	BUNV	0	0.52	0.52
TDRD7	vaccinia virus	VV	0	0.5	0.5
TDRD7	coxsackie B virus	CVB	0	-1.18	1.18
TDRD7	poliovirus	PV	0	-2.26	2.26
TDRD7	equine arterivirus	EAV	0	1.4	1.4
TDRD7	Sindbis virus Girdwood	SINV-G	0		
TDRD7	Sindbis virus AR86	SINV-A	0	-0.25	0.25
TDRD7	O'nyong nyong virus	ONNV	0	0.66	0.66
TDRD7	influenza A virus	FLUAV	0	-0.85	0.85
TDRD7	human parainfluenza virus type 3	PIV3	0	-1.45	1.45
TDRD7	Newcastle disease virus	NDV	0	1.3	1.3
TDRD7	human metapneumovirus	HMPV	0	0.18	0.18
TDRD7	respiratory syncytial virus	RSV	0	-0.39	0.39
TDRD7	measles virus	MV	0	0.8	0.8
TDRD7	bunyamwera virus	BUNV	0	0.37	0.37
TFEC	vaccinia virus	VV	0	1.76	1.76
TFEC	coxsackie B virus	CVB	0		
TFEC	poliovirus	PV	0		
TFEC	equine arterivirus	EAV	0	0.88	0.88

TFEC	Sindbis virus Girdwood	SINV-G	0	0.44	0.44
TFEC	Sindbis virus AR86	SINV-A	0	0.9	0.9
TFEC	O'nyong nyong virus	ONNV	0	0.6	0.6
TFEC	Newcastle disease virus	NDV	0	1.17	1.17
TFEC	human metapneumovirus	HMPV	0	-0.37	0.37
TFEC	respiratory syncytial virus	RSV	0	0.74	0.74
TFEC	bunyamwera virus	BUNV	0	-0.69	0.69
THBD	vaccinia virus	VV	0	0.04	0.04
THBD	coxsackie B virus	CVB	0	-2.97	2.97
THBD	poliovirus	PV	0	-3.14	3.14
THBD	equine arterivirus	EAV	0	-1.34	1.34
THBD	Sindbis virus Girdwood	SINV-G	0	-0.92	0.92
THBD	Sindbis virus AR86	SINV-A	0	-0.6	0.6
THBD	O'nyong nyong virus	ONNV	0	1.04	1.04
THBD	Newcastle disease virus	NDV	0	0.25	0.25
THBD	human metapneumovirus	HMPV	0	1.91	1.91
THBD	respiratory syncytial virus	RSV	0	-2.41	2.41
THBD	bunyamwera virus	BUNV	0		
THOC4	coxsackie B virus	CVB	0	-0.53	0.53
THOC4	poliovirus	PV	0	0.64	0.64
THOC4	equine arterivirus	EAV	0	-0.62	0.62
THOC4	Sindbis virus Girdwood	SINV-G	0	-2.01	2.01
THOC4	Sindbis virus AR86	SINV-A	0	-1.58	1.58
THOC4	O'nyong nyong virus	ONNV	0	-2.18	2.18
THOC4	human parainfluenza virus type 3	PIV3	0	-0.26	0.26
THOC4	Newcastle disease virus	NDV	0	0.96	0.96
THOC4	human metapneumovirus	HMPV	0	0.73	0.73
THOC4	respiratory syncytial virus	RSV	0	-1.62	1.62
THOC4	measles virus	MV	0	-0.87	0.87
THOC4	bunyamwera virus	BUNV	0	0.05	0.05
TLR3	equine arterivirus	EAV	0	0.37	0.37
TLR3	Sindbis virus Girdwood	SINV-G	0	-0.74	0.74
TLR3	Sindbis virus AR86	SINV-A	0	-1.38	1.38
TLR3	O'nyong nyong virus	ONNV	0	0.61	0.61
TLR7	equine arterivirus	EAV	0	1.81	1.81
TLR7	Sindbis virus Girdwood	SINV-G	0	2.29	2.29
TLR7	Sindbis virus AR86	SINV-A	0		
TLR7	O'nyong nyong virus	ONNV	0		
TMEM140	vaccinia virus	VV	0	-0.87	0.87
TMEM140	coxsackie B virus	CVB	0	1.01	1.01
TMEM140	poliovirus	PV	0	2.2	2.2
TMEM140	equine arterivirus	EAV	0	0.81	0.81
TMEM140	Sindbis virus Girdwood	SINV-G	0	-0.22	0.22
TMEM140	Sindbis virus AR86	SINV-A	0	0.62	0.62
TMEM140	O'nyong nyong virus	ONNV	0	1.15	1.15
TMEM140	influenza A virus	FLUAV	0	-0.75	0.75
TMEM140	human parainfluenza virus type 3	PIV3	0	0.26	0.26
TMEM140	Newcastle disease virus	NDV	0	-1.25	1.25
TMEM140	human metapneumovirus	HMPV	0	-0.51	0.51
TMEM140	respiratory syncytial virus	RSV	0	0.43	0.43
TMEM140	measles virus	MV	0	0.06	0.06
TMEM140	bunyamwera virus	BUNV	0	-1.31	1.31
TMEM51	vaccinia virus	VV	0	0.32	0.32
TMEM51	coxsackie B virus	CVB	0	2	2
TMEM51	poliovirus	PV	0	0.24	0.24
TMEM51	equine arterivirus	EAV	0	0.9	0.9
TMEM51	Sindbis virus Girdwood	SINV-G	0	-0.3	0.3
TMEM51	Sindbis virus AR86	SINV-A	0	1.25	1.25

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TMEM51	O'nyong nyong virus	ONNV	0		
TMEM51	influenza A virus	FLUAV	0	-0.05	0.05
TMEM51	human parainfluenza virus type 3	PIV3	0	-2.3	2.3
TMEM51	Newcastle disease virus	NDV	0	0.74	0.74
TMEM51	human metapneumovirus	HMPV	0	-0.54	0.54
TMEM51	respiratory syncytial virus	RSV	0	-1.26	1.26
TMEM51	measles virus	MV	0	0.97	0.97
TMEM51	bunyamwera virus	BUNV	0	-0.07	0.07
TNFAIP3	coxsackie B virus	CVB	0	-1.06	1.06
TNFAIP3	poliovirus	PV	0	-0.73	0.73
TNFAIP3	equine arterivirus	EAV	0	-0.16	0.16
TNFAIP3	Sindbis virus Girdwood	SINV-G	0	-1.05	1.05
TNFAIP3	Sindbis virus AR86	SINV-A	0	0.23	0.23
TNFAIP3	O'nyong nyong virus	ONNV	0	0.23	0.23
TNFAIP3	Newcastle disease virus	NDV	0	1.64	1.64
TNFAIP3	human metapneumovirus	HMPV	0	-0.06	0.06
TNFAIP3	respiratory syncytial virus	RSV	0	0.4	0.4
TNFAIP3	bunyamwera virus	BUNV	0	0.05	0.05
TNFRSF10A	vaccinia virus	VV	0	-3.89	3.89
TNFRSF10A	coxsackie B virus	CVB	0	-3.42	3.42
TNFRSF10A	poliovirus	PV	0	-2.11	2.11
TNFRSF10A	equine arterivirus	EAV	0	-1.7	1.7
TNFRSF10A	Sindbis virus Girdwood	SINV-G	0		
TNFRSF10A	Sindbis virus AR86	SINV-A	0		
TNFRSF10A	O'nyong nyong virus	ONNV	0		
TNFRSF10A	influenza A virus	FLUAV	0		
TNFRSF10A	human parainfluenza virus type 3	PIV3	0	1.83	1.83
TNFRSF10A	Newcastle disease virus	NDV	0	0.86	0.86
TNFRSF10A	human metapneumovirus	HMPV	0	0.52	0.52
TNFRSF10A	respiratory syncytial virus	RSV	0	-0.19	0.19
TNFRSF10A	measles virus	MV	0		
TNFRSF10A	bunyamwera virus	BUNV	0	-0.5	0.5
TRAFD1	vaccinia virus	VV	0	1.1	1.1
TRAFD1	coxsackie B virus	CVB	0	-2.03	2.03
TRAFD1	poliovirus	PV	0	-4.71	4.71
TRAFD1	equine arterivirus	EAV	0	0.11	0.11
TRAFD1	Sindbis virus Girdwood	SINV-G	0	-0.22	0.22
TRAFD1	Sindbis virus AR86	SINV-A	0	-0.52	0.52
TRAFD1	O'nyong nyong virus	ONNV	0	0.29	0.29
TRAFD1	influenza A virus	FLUAV	0	-0.42	0.42
TRAFD1	human parainfluenza virus type 3	PIV3	0	-0.84	0.84
TRAFD1	Newcastle disease virus	NDV	0	0.16	0.16
TRAFD1	human metapneumovirus	HMPV	0	0.73	0.73
TRAFD1	respiratory syncytial virus	RSV	0	-0.48	0.48
TRAFD1	measles virus	MV	0	0.39	0.39
TRAFD1	bunyamwera virus	BUNV	0	-1.26	1.26
TRIM14	vaccinia virus	VV	0	1.37	1.37
TRIM14	coxsackie B virus	CVB	0	-2.83	2.83
TRIM14	poliovirus	PV	0	1	1
TRIM14	equine arterivirus	EAV	0	-0.68	0.68
TRIM14	Sindbis virus Girdwood	SINV-G	0	-3.14	3.14
TRIM14	Sindbis virus AR86	SINV-A	0	-2.71	2.71
TRIM14	O'nyong nyong virus	ONNV	0	-0.33	0.33
TRIM14	Newcastle disease virus	NDV	0	-0.66	0.66
TRIM14	human metapneumovirus	HMPV	0	1.45	1.45
TRIM14	respiratory syncytial virus	RSV	0	0.66	0.66
TRIM14	bunyamwera virus	BUNV	0	-0.35	0.35

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TRIM25	coxsackie B virus	CVB	0	-4.3	4.3
TRIM25	equine arterivirus	EAV	0	-2.64	2.64
TRIM25	Sindbis virus Girdwood	SINV-G	0	-2.68	2.68
TRIM25	Sindbis virus AR86	SINV-A	0	-1.86	1.86
TRIM25	O'nyong nyong virus	ONNV	0	-0.79	0.79
TRIM25	human metapneumovirus	HMPV	0	-1.54	1.54
TRIM25	measles virus	MV	0	-2.78	2.78
TRIM25	bunyamwera virus	BUNV	0	1.16	1.16
UBA7	vaccinia virus	VV	0		
UBA7	coxsackie B virus	CVB	0		
UBA7	poliovirus	PV	0		
UBA7	equine arterivirus	EAV	0	2.1	2.1
UBA7	Sindbis virus Girdwood	SINV-G	0		
UBA7	Sindbis virus AR86	SINV-A	0		
UBA7	O'nyong nyong virus	ONNV	0		
UBA7	influenza A virus	FLUAV	0		
UBA7	human parainfluenza virus type 3	PIV3	0		
UBA7	Newcastle disease virus	NDV	0	0.97	0.97
UBA7	human metapneumovirus	HMPV	0		
UBA7	respiratory syncytial virus	RSV	0		
UBA7	measles virus	MV	0	-0.24	0.24
UBA7	bunyamwera virus	BUNV	0		
UBE2L6	vaccinia virus	VV	0	-0.15	0.15
UBE2L6	coxsackie B virus	CVB	0	0.75	0.75
UBE2L6	poliovirus	PV	0	0.01	0.01
UBE2L6	equine arterivirus	EAV	0	-0.58	0.58
UBE2L6	Sindbis virus Girdwood	SINV-G	0	-0.27	0.27
UBE2L6	Sindbis virus AR86	SINV-A	0	0.01	0.01
UBE2L6	O'nyong nyong virus	ONNV	0	-0.09	0.09
UBE2L6	influenza A virus	FLUAV	0	1.13	1.13
UBE2L6	human parainfluenza virus type 3	PIV3	0	0.47	0.47
UBE2L6	Newcastle disease virus	NDV	0	-0.49	0.49
UBE2L6	human metapneumovirus	HMPV	0	-0.67	0.67
UBE2L6	respiratory syncytial virus	RSV	0	-0.31	0.31
UBE2L6	measles virus	MV	0	-0.03	0.03
UBE2L6	bunyamwera virus	BUNV	0	-2.15	2.15
UNC93B1	vaccinia virus	VV	0	-0.2	0.2
UNC93B1	coxsackie B virus	CVB	0	-0.19	0.19
UNC93B1	poliovirus	PV	0	0	0
UNC93B1	equine arterivirus	EAV	0	-0.79	0.79
UNC93B1	Sindbis virus Girdwood	SINV-G	0	-3.5	3.5
UNC93B1	O'nyong nyong virus	ONNV	0	-3.82	3.82
UNC93B1	influenza A virus	FLUAV	0	-1.73	1.73
UNC93B1	human parainfluenza virus type 3	PIV3	0	-0.19	0.19
UNC93B1	Newcastle disease virus	NDV	0	0.09	0.09
UNC93B1	human metapneumovirus	HMPV	0	1.76	1.76
UNC93B1	respiratory syncytial virus	RSV	0	-1.86	1.86
UNC93B1	measles virus	MV	0	-1.78	1.78
UNC93B1	bunyamwera virus	BUNV	0	0.65	0.65
ZBP1	coxsackie B virus	CVB	0	-7.09	7.09
ZBP1	poliovirus	PV	0	-3.71	3.71
ZBP1	equine arterivirus	EAV	0	-1.8	1.8
ZBP1	Sindbis virus Girdwood	SINV-G	0	-1.92	1.92
ZBP1	Sindbis virus AR86	SINV-A	0	-3.65	3.65
ZBP1	O'nyong nyong virus	ONNV	0	-2.11	2.11
ZBP1	human parainfluenza virus type 3	PIV3	0	1.53	1.53
ZBP1	Newcastle disease virus	NDV	0	0.53	0.53



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ZBP1	human metapneumovirus	HMPV	0	0.82	0.82
ZBP1	measles virus	MV	0	0.43	0.43
ZNF295	vaccinia virus	VV	0		
ZNF295	coxsackie B virus	CVB	0		
ZNF295	poliovirus	PV	0		
ZNF295	equine arterivirus	EAV	0	1.73	1.73
ZNF295	Sindbis virus Girdwood	SINV-G	0	2.21	2.21
ZNF295	Sindbis virus AR86	SINV-A	0		
ZNF295	O'nyong nyong virus	ONNV	0		
ZNF295	influenza A virus	FLUAV	0	-1.15	1.15
ZNF295	human parainfluenza virus type 3	PIV3	0		
ZNF295	Newcastle disease virus	NDV	0		
ZNF295	human metapneumovirus	HMPV	0	-0.09	0.09
ZNF295	respiratory syncytial virus	RSV	0		
ZNF295	measles virus	MV	0	0.1	0.1
ZNF295	bunyamwera virus	BUNV	0		