

## Welcome to the Biological General Repository for Interaction Datasets

BioGRID is an interaction repository with data compiled through comprehensive curation efforts. Our current index is version **3.4.153** and searches **63,683** publications for **1,499,723** protein and genetic interactions, **27,785** chemical associations and **38,559** post translational modifications from major model organism species. All data are **freely** provided via our search index and available for download in standardized formats.

INTERACTION STATISTICS

LATEST DOWNLOADS

### Search the BioGRID

Search by identifiers, keywords, and gene names...

RAG1

All Organisms

SUBMIT GENE SEARCH Q



Advanced Search



Search Tips



Featured Datasets

By Gene

By Publication

#### AREAS OF INTEREST TO HELP YOU GET STARTED



##### Build and Download Interaction Datasets

Create custom interaction datasets by protein or by publication. You can also download our entire dataset in a wide variety of standard formats.



##### Link To Us or Submit Interactions

Send us your datasets or link to the BioGRID directly from your own website or database. Full details on how to contribute are available here.



##### Online Tools and Resources

We've developed tools that make use of BioGRID data. Check out the list of tools to see if we can help you work with our data.



##### View Our Interaction Statistics

Find out how many organisms, proteins, publications, and interactions are available in the current release of the BioGRID.

#### BIOGRID FUNDING AND PARTNERS



more partners

#### LATEST NEWS

##### BioGRID Version 3.4.153 Released

The **BioGRID's** curated set of physical and genetic interactions has been updated to include interactions, chemical associations, and post-translational modifications (PTM) from **63,683** publications. These additions bring our total number of non-redundant interactions to **1,162,605**, raw interactions to **1,499,723**, non-redundant chemical associations to **11,820**, raw chemical associations to **27,785**, Unique PTM Sites to **19,981**, and Un-Assigned PTMs to **18,578**. New curated data will be added in curation updates on a monthly basis. For a more comprehensive breakdown of our numbers, check out our latest **interaction statistics**. To download these data, visit our **download page**.

Posted: October 1, 2017 - 3:21 am

##### BioGRID Version 3.4.152 Released

The **BioGRID's** curated set of physical and genetic interactions has been updated to include interactions, chemical associations, and post-translational modifications (PTM) from **63,487** publications. These additions bring our total number of non-redundant interactions to **1,158,978**, raw interactions to **1,495,320**, non-redundant chemical associations to **11,820**, raw chemical associations to **27,785**, Unique PTM Sites to **19,981**, and Un-Assigned PTMs to **18,578**. New curated data will be added in curation updates on a monthly basis. For a more comprehensive breakdown of our numbers, check out our latest **interaction statistics**. To download these data, visit our **download page**.

Posted: September 1, 2017 - 4:03 am

#### LATEST UPDATES

**BioGRID @biogrid**  
Build 3.4.153 Released w/ 63,683 pubs, 1,499,723 interactions, 27,785 chemical associations and 38,559 total PTMs [thebiogrid.org/news/187](http://thebiogrid.org/news/187)



**BioGRID Version 3.4.153 Released**  
The BioGRID's curated set of physical and genetic interactions has been [thebiogrid.org](http://thebiogrid.org)



Oct 8, 2017

**BioGRID @biogrid**  
Build 3.4.152 Released w/ 63,487 pubs, 1,495,320 interactions, 27,785 chemical associations and 38,559 total PTMs [thebiogrid.org/news/186](http://thebiogrid.org/news/186)



**BioGRID Version 3.4.152 Released**  
The BioGRID's curated set of physical and genetic interactions has been [thebiogrid.org](http://thebiogrid.org)



Sep 4, 2017

# Search Results

Gene / Identifier Search

GO

All Organisms

Your search for **RAG1** produced the following **69** results:

Results matching **official symbol / systematic name** - 65 total proteins:

<p><b>RAG1</b> recombination activating gene 1</p>	<p><i>Homo sapiens</i> 25 unique interactors 50 raw interactions</p>
<p><b>RAG1 (RP23-325I3.3)</b> recombination activating gene 1</p>	<p><i>Mus musculus</i> 12 unique interactors 13 raw interactions</p>
<p><a href="#">View 63 Matching Proteins Without Interactions</a></p>	

Results matching **synonym / alias name** - 4 total proteins:

<p><b>HXT4 (YHR092C)</b> Matching Synonym: RAG1 High-affinity glucose transporter, member of the major facilitator superfamily, expression is induced by low levels of glucose and repressed by high levels of glucose; HXT4 has a paralog, HXT7, that arose from the whole genome duplication</p> <p><b>UB1</b></p>	<p><i>Saccharomyces cerevisiae (S288c)</i> 66 unique interactors 69 raw interactions 1 post-translational modification</p>
<p><b>KAPP (AT5G19280)</b> Matching Synonym: RAG1 kinase associated protein phosphatase</p>	<p><i>Arabidopsis thaliana (Columbia)</i> 12 unique interactors 26 raw interactions</p>
<p><a href="#">View 2 Matching Proteins Without Interactions</a></p>	

# Result Summary

Gene / Identifier Search

GO

## RAG1

RAG-1, RNF74

*Homo sapiens*

recombination activating gene 1

GO Process (9)

GO Function (9)

GO Component (1)

EXTERNAL DATABASE LINKOUTS

[OMIM](#) | [HGNC](#) | [VEGA](#) | [Entrez Gene](#) | [RefSeq](#) | [UniprotKB](#) | [Ensembl](#) | [HPRD](#)

[Download 50 Published Interactions For This Protein](#)

### Stats & Options

#### Current Statistics

Publications: 18

High Throughput	49 Physical Interactions	Low Throughput
1 (2%)	48 (98%)	
0 (0%)	1 Genetic Interaction	1 (100%)

#### Search Filters

Customize how your results are displayed...

No Filter: Show All Associations 

Switch View: **Interactors (25)** Interactions (50) Network

Displaying 25 total unique interactors

Sort By: [\[Evidence\]](#) [\[Alphabetical\]](#)

### RAG2




RAG-2

recombination activating gene 2

7

[\[details\]](#)

**UBI**

Experimental Evidence Code	Role	Dataset	Throughput	Curated By	Notes
Affinity Capture-Western 	HIT	McMahan CJ (1997)	Low	BioGRID	-
	BAIT/HIT	Villa A (1998)	Low	BioGRID	-
	BAIT/HIT	Spanopoulou E (1995)	Low	BioGRID	-
	BAIT	Zhang YH (2015)	Low	BioGRID	-
Co-purification 	HIT	Singh SK (2015)	Low	BioGRID	-
Reconstituted Complex 	BAIT	Ko JE (2004)	Low	BioGRID	-
	BAIT	Zhang YH (2015)	Low	BioGRID	-

### KPNA1

IPOA5, NPI-1, RCH2, SRP1

karyopherin alpha 1 (importin alpha 5)

4

[\[details\]](#)

**UBI**

**SUMO**

Experimental Evidence Code	Role	Dataset	Throughput	Curated By	Notes
Affinity Capture-Western 	BAIT/HIT	Cortes P (1994)	Low	BioGRID	-
	HIT	Spanopoulou E (1995)	Low	BioGRID	-
Two-hybrid 	HIT	Cortes P (1994)	Low	BioGRID	-
	HIT	Spanopoulou E (1995)	Low	BioGRID	-

### HIST3H3

H3.4, H3/g, H3FT, H3t

histone cluster 3, H3

4

[\[details\]](#)

**UBI**

**NEDD**

### UBE2D2

E2(17)KB2, PUBC1, UBC4, UBC4/5, UBCH4, UBCH5B

ubiquitin-conjugating enzyme E2D 2

3

[\[details\]](#)

**UBI**

### VPRBP

DCAF1

Vpr (HIV-1) binding protein

3

[\[details\]](#)