

**Gcn111 Polyclonal Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP55130**

## Specification

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### Gcn111 Polyclonal Antibody - Product Information

Application	<b>WB, IHC-P, IHC-F, IF, ICC, E</b>
Primary Accession	<a href="#">O92616</a>
Reactivity	<b>Rat, Dog, Bovine</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>292710</b>

### Gcn111 Polyclonal Antibody - Additional Information

**Gene ID** 10985

#### Other Names

eIF-2-alpha kinase activator GCN1, HsGCN1, GCN1 ([HGNC:4199](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=4199))

#### Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glycerol

#### Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

### Gcn111 Polyclonal Antibody - Protein Information

**Name** GCN1 {ECO:0000303|PubMed:9234705, ECO:0000312|HGNC:HGNC:4199}

#### Function

Ribosome collision sensor that plays a key role in the RNF14- RNF25 translation quality control pathway, a pathway that takes place when a ribosome has stalled during translation, and which promotes ubiquitination and degradation of translation factors on stalled ribosomes (PubMed: [32610081](http://www.uniprot.org/citations/32610081), PubMed: [36638793](http://www.uniprot.org/citations/36638793), PubMed: [37651229](http://www.uniprot.org/citations/37651229), PubMed: [37951215](http://www.uniprot.org/citations/37951215), PubMed: [37951216](http://www.uniprot.org/citations/37951216)). Directly binds to the ribosome and acts as a sentinel for colliding ribosomes: activated following ribosome stalling and promotes recruitment of RNF14, which directly ubiquitinates EEF1A1/eEF1A, leading to its degradation (PubMed: [36638793](http://www.uniprot.org/citations/36638793), PubMed: [37951215](http://www.uniprot.org/citations/37951215), PubMed: [37951216](http://www.uniprot.org/citations/37951216)). In addition to EEF1A1/eEF1A, the RNF14-RNF25 translation

quality control pathway mediates degradation of ETF1/eRF1 and ubiquitination of ribosomal protein (PubMed:<a href="http://www.uniprot.org/citations/36638793" target="\_blank">36638793</a>, PubMed:<a href="http://www.uniprot.org/citations/37651229" target="\_blank">37651229</a>). GCN1 also acts as a positive activator of the integrated stress response (ISR) by mediating activation of EIF2AK4/GCN2 in response to amino acid starvation (By similarity). Interaction with EIF2AK4/GCN2 on translating ribosomes stimulates EIF2AK4/GCN2 kinase activity, leading to phosphorylation of eukaryotic translation initiation factor 2 (eIF-2-alpha/EIF2S1) (By similarity). EIF2S1/eIF-2-alpha phosphorylation converts EIF2S1/eIF-2-alpha into a global protein synthesis inhibitor, leading to a global attenuation of cap-dependent translation, and thus to a reduced overall utilization of amino acids, while concomitantly initiating the preferential translation of ISR-specific mRNAs, such as the transcriptional activator ATF4, and hence allowing ATF4-mediated reprogramming of amino acid biosynthetic gene expression to alleviate nutrient depletion (By similarity).

**Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:E9PVA8}. Note=Associates with ribosomes in undifferentiated neuroblastoma cells and increases after neuronal differentiation {ECO:0000250|UniProtKB:E9PVA8}

**Tissue Location**

Ubiquitously expressed (PubMed:9039502). Expressed in skeletal muscles, ovary and testis (PubMed:9234705)

**Gcn1I1 Polyclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Gcn1I1 Polyclonal Antibody - Images**