

## **Gcn1l1 Polyclonal Antibody**

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55130

## **Specification**

## **Gcn1l1 Polyclonal Antibody - Product Information**

Application
Primary Accession
Reactivity

Host Clonality Calculated MW WB, IHC-P, IHC-F, IF, ICC, E Q92616 Rat, Dog, Bovine Rabbit Polyclonal

292710

## **Gcn1l1 Polyclonal Antibody - Additional Information**

## **Gene ID** 10985

#### **Other Names**

elF-2-alpha kinase activator GCN1, HsGCN1, GCN1 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=4199" target=" blank">HGNC:4199</a>)

### **Dilution**

<span class ="dilution\_WB">WB~~1:1000</span><br \> <span class
="dilution\_IHC-P">IHC-P~~N/A</span><br \> <span class
="dilution\_IHC-F">IHC-F~~N/A</span><br \> <span class
="dilution\_IF">IF~~1:50~200</span><br \> <span class ="dilution\_ICC">ICC~~N/A</span><br \> <span class ="dilution\_ICC">ICC~~N/A</span><br \> <span class = "dilution\_ICC">ICC~~N/A</span>

#### **Format**

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

#### Storage

Store at -20  $^{\circ}$ 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  $^{\circ}$ C.

## **Gcn1l1 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:<a href="http://www.uniprot.org/citations/32610081" target="\_blank">32610081</a>, 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>, PubMed:<a href="http://www.uniprot.org/citations/37951215" target="\_blank">37951215</a>, PubMed:<a



href="http://www.uniprot.org/citations/37951216" target=" blank">37951216</a>). 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:<a href="http://www.uniprot.org/citations/36638793" target=" blank">36638793</a>, PubMed:<a href="http://www.uniprot.org/citations/37951215" target="blank">37951215</a>, PubMed:<a href="http://www.uniprot.org/citations/37951216" target=" blank">37951216</a>). 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-2alpha 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 muscules, ovary and testis (PubMed:9234705)

## Gcn1l1 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 Cytomety
- Cell Culture

# Gcn1l1 Polyclonal Antibody - Images