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Gcn1l1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55130

Specification

Gcn1l1 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q92616
Reactivity	**Rat, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**293 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human Gcn1l1**
Epitope Specificity	**751-850/2671**
Isotype	**IgG**

Purity
affinity purified by Protein A

Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Cytoplasmic**
SIMILARITY	**Belongs to the GCN1 family. Contains 24 HEAT repeats.**
SUBUNIT	**Interacts with IMPACT; prevents the interaction with GCN2 protein kinase (EIF2AK1-4) (By similarity).**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
GCN1L1 is a 2,671 amino acid protein that is ubiquitously expressed and belongs to the GCN1 family. Functioning as a translation activator, GCN1L1 interacts with IMPACT to regulproteinate GCN2 kinase activity. GCN1L1 contains 24 HEAT repeats and is encoded by a gene that maps to human chromosome 12q24.23. Chromosome 12 encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

Gcn1l1 Polyclonal Antibody - Additional Information

Gene ID 10985

Other Names
eIF-2-alpha kinase activator GCN1, HsGCN1, GCN1 (HGNC:4199)

Target/Specificity
Ubiquitously expressed.

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Storage
Store at -20 ℃ 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 ℃.

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:32610081, PubMed:36638793, PubMed:37651229, PubMed:37951215, PubMed: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, PubMed:37951215, PubMed:37951216). In addition to EEF1A1/eEF1A, the RNF14-RNF25 translation quality control pathway mediates degradation of ETF1/eRF1 and ubiquitination of ribosomal protein (PubMed:36638793, PubMed:37651229). 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 muscules, ovary and testis (PubMed:9234705)

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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