

**Phospho-GCN2 (T899) Antibody**  
**Rabbit mAb**  
**Catalog # AP90142****Specification**

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**Phospho-GCN2 (T899) Antibody - Product Information**

|                                             |                        |
|---------------------------------------------|------------------------|
| Application                                 | WB                     |
| Primary Accession                           | <a href="#">Q9P2K8</a> |
| Clonality                                   | Monoclonal             |
| <b>Other Names</b>                          |                        |
| GCN2-like protein; GCN2; KIAA1338; EIF2AK4; |                        |
| Isotype                                     | Rabbit IgG             |
| Host                                        | Rabbit                 |
| Calculated MW                               | 186911 Da              |

**Phospho-GCN2 (T899) Antibody - Additional Information**

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dilution                     | WB~~1:1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Purification                 | Affinity-chromatography                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Immunogen                    | A synthesized peptide derived from human Phospho-GCN2 (T899)                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Description                  | This gene encodes a member of a family of kinases that phosphorylate the alpha subunit of eukaryotic translation initiation factor-2 (EIF2), resulting in the downregulation of protein synthesis. The encoded protein responds to amino acid deprivation by binding uncharged transfer RNAs. It may also be activated by glucose deprivation and viral infection. Mutations in this gene have been found in individuals suffering from autosomal recessive pulmonary venoocclusive-disease-2. |
| Storage Condition and Buffer | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.                                                                                                                                                                                                                                                                                                              |

**Phospho-GCN2 (T899) Antibody - Protein Information****Name** EIF2AK4 ([HGNC:19687](#))**Synonyms** GCN2, KIAA1338**Function**

Metabolic-stress sensing protein kinase that phosphorylates the alpha subunit of eukaryotic translation initiation factor 2 (EIF2S1/eIF-2-alpha) in response to low amino acid availability

(PubMed:<a href="http://www.uniprot.org/citations/25329545" target="\_blank">25329545</a>, PubMed:<a href="http://www.uniprot.org/citations/32610081" target="\_blank">32610081</a>). Plays a role as an activator of the integrated stress response (ISR) required for adaptation to amino acid starvation (By similarity). EIF2S1/eIF-2-alpha phosphorylation in response to stress 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 (PubMed:<a href="http://www.uniprot.org/citations/32610081" target="\_blank">32610081</a>). Binds uncharged tRNAs (By similarity). Required for the translational induction of protein kinase PRKCH following amino acid starvation (By similarity). Involved in cell cycle arrest by promoting cyclin D1 mRNA translation repression after the unfolded protein response pathway (UPR) activation or cell cycle inhibitor CDKN1A/p21 mRNA translation activation in response to amino acid deprivation (PubMed:<a href="http://www.uniprot.org/citations/26102367" target="\_blank">26102367</a>). Plays a role in the consolidation of synaptic plasticity, learning as well as formation of long-term memory (By similarity). Plays a role in neurite outgrowth inhibition (By similarity). Plays a proapoptotic role in response to glucose deprivation (By similarity). Promotes global cellular protein synthesis repression in response to UV irradiation independently of the stress-activated protein kinase/c-Jun N-terminal kinase (SAPK/JNK) and p38 MAPK signaling pathways (By similarity). Plays a role in the antiviral response against alphavirus infection; impairs early viral mRNA translation of the incoming genomic virus RNA, thus preventing alphavirus replication (By similarity).

#### **Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:Q9QZ05}.

#### **Tissue Location**

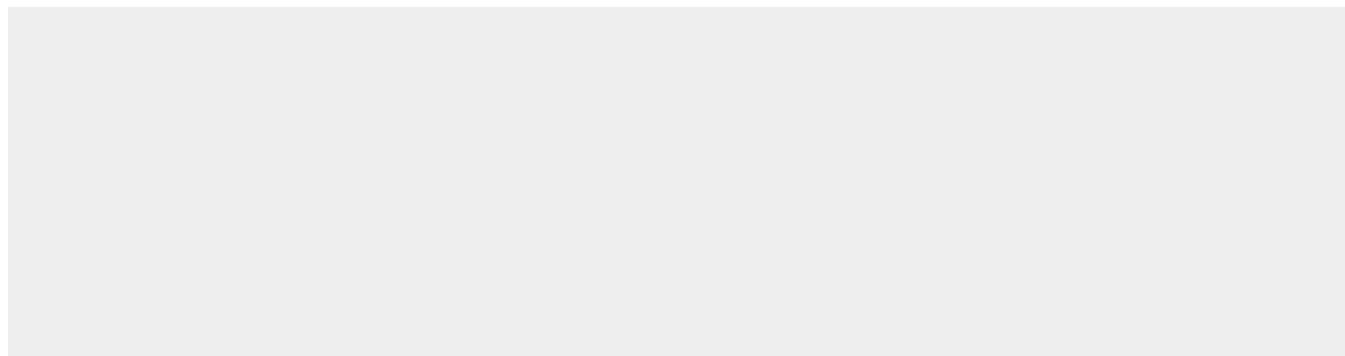
Widely expressed (PubMed:10504407). Expressed in lung, smooth muscle cells and macrophages (PubMed:24292273)

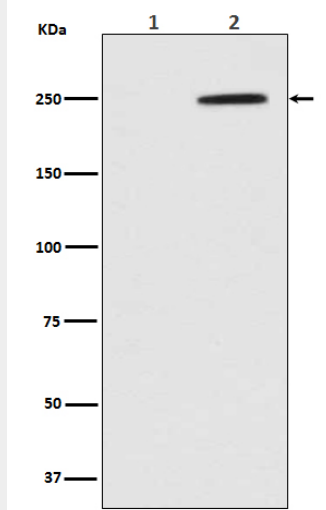
### **Phospho-GCN2 (T899) Antibody - Protocols**

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](#)

### **Phospho-GCN2 (T899) Antibody - Images**





Western blot analysis of Phospho-GCN2 (Thr899) in (1) HeLa cell lysate; (2) HeLa cell lysate treated with Calyculin.