

[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: [36638793](http://www.uniprot.org/citations/36638793), PubMed: [37651229](http://www.uniprot.org/citations/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 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