

EIF2S1 Antibody (clone AT5E10)
Mouse Monoclonal Antibody
Catalog # ALS14457**Specification**

EIF2S1 Antibody (clone AT5E10) - Product Information

Application	WB, IHC
Primary Accession	P05198
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	36kDa KDa

EIF2S1 Antibody (clone AT5E10) - Additional Information**Gene ID** 1965**Other Names**

Eukaryotic translation initiation factor 2 subunit 1, Eukaryotic translation initiation factor 2 subunit alpha, eIF-2-alpha, eIF-2A, eIF-2alpha, EIF2S1, EIF2A

Target/Specificity

Human EIF2S1

Reconstitution & Storage

Can be stored at 4°C. For long term storage, aliquot and store at -20°C. Avoid repeated freezing and thawing cycles.

Precautions

EIF2S1 Antibody (clone AT5E10) is for research use only and not for use in diagnostic or therapeutic procedures.

EIF2S1 Antibody (clone AT5E10) - Protein Information**Name** EIF2S1 ([HGNC:3265](#))**Synonyms** EIF2A**Function**

Member of the eIF2 complex that functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA (PubMed: [16289705](http://www.uniprot.org/citations/16289705)). This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form a 43S pre-initiation complex (43S PIC) (PubMed: [16289705](http://www.uniprot.org/citations/16289705)). Junction of the 60S ribosomal subunit to form the 80S initiation complex is preceded by hydrolysis of the GTP bound to eIF2 and release of an eIF2-GDP binary complex (PubMed: [16289705](http://www.uniprot.org/citations/16289705)). In order for eIF2 to recycle and catalyze another round of

initiation, the GDP bound to eIF2 must exchange with GTP by way of a reaction catalyzed by eIF2B (PubMed: [16289705](http://www.uniprot.org/citations/16289705)). EIF2S1/ component of the integrated stress response (ISR), required for adaptation to various stress: phosphorylation by metabolic-stress sensing protein kinases (EIF2AK1/HRI, EIF2AK2/PKR, EIF2AK3/PERK and EIF2AK4/GCN2) in response to stress converts EIF2S1/eIF2-alpha in a global protein synthesis inhibitor, leading to an attenuation of cap- dependent translation, while concomitantly initiating the preferential translation of ISR-specific mRNAs, such as the transcriptional activators ATF4 and QRICH1, and hence allowing ATF4- and QRICH1- mediated reprogramming (PubMed: [19131336](http://www.uniprot.org/citations/19131336), PubMed: [33384352](http://www.uniprot.org/citations/33384352)).

Cellular Location

Cytoplasm, Stress granule {ECO:0000250|UniProtKB:Q6ZWX6}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P56286}. Note=Colocalizes with NANOS3 in the stress granules. {ECO:0000250|UniProtKB:Q6ZWX6}

Volume

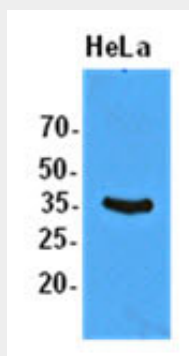
50 µl

EIF2S1 Antibody (clone AT5E10) - Protocols

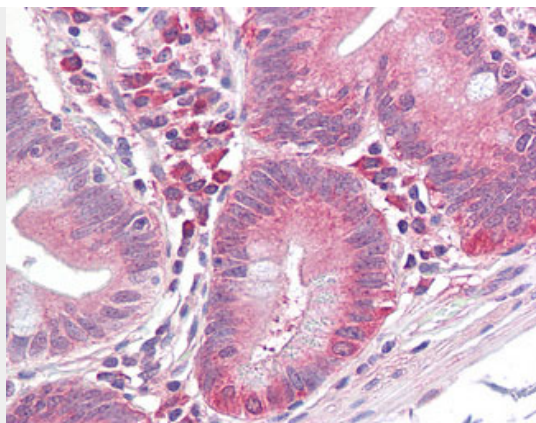
Provided below are standard protocols that you may find useful for product applications.

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

EIF2S1 Antibody (clone AT5E10) - Images



Extracts of HeLa (50 ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with...



Anti-EIF2S1 antibody IHC of human small intestine.

EIF2S1 Antibody (clone AT5E10) - Background

Functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA. This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form a 43S preinitiation complex. Junction of the 60S ribosomal subunit to form the 80S initiation complex is preceded by hydrolysis of the GTP bound to eIF-2 and release of an eIF-2-GDP binary complex. In order for eIF-2 to recycle and catalyze another round of initiation, the GDP bound to eIF-2 must exchange with GTP by way of a reaction catalyzed by eIF-2B.

EIF2S1 Antibody (clone AT5E10) - References

Ernst H.,et al.J. Biol. Chem. 262:1206-1212(1987).
Langland J.O.,et al.Virology 324:419-429(2004).
Paytubi S.,et al.Biochem. J. 409:223-231(2008).
Montero H.,et al.J. Virol. 82:1496-1504(2008).
Mayya V.,et al.Sci. Signal. 2:RA46-RA46(2009).