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EIF2A Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8703b

Specification

EIF2A Antibody - Product Information

Application	**WB,E**
Primary Accession	P05198
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**monoclonal**
Isotype	**IgG2b,k**

EIF2A Antibody - 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
This EIF2A antibody is generated from a mouse immunized with a recombinant protein of human EIF2A.

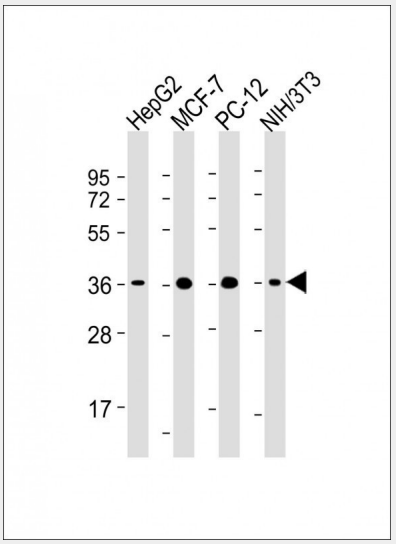
Dilution
WB~~1:2000

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
EIF2A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

EIF2A Antibody - Protein Information



All lanes : Anti-EIF2A Antibody at 1:2000 dilution Lane 1: HepG2 whole cell lysate Lane 2: MCF-7 whole cell lysate Lane 3: PC-12 whole cell lysate Lane 4: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

EIF2A Antibody - 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.

EIF2A Antibody - References

Name EIF2S1 (HGNC:3265)

Synonyms EIF2A

Function
Functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA (PubMed:16289705). This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form a 43S pre-initiation complex (PubMed:16289705). 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 (PubMed:16289705). 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 (PubMed:16289705). EIF2S1/eIF-2-alpha is a key 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/eIF-2-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, PubMed:33384352).

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

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).

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EIF2A 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