

eIF2 α Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52859**Specification**

eIF2 α Antibody - Product Information

Application	WB
Primary Accession	P05198
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	38 KDa

eIF2 α Antibody - Additional Information**Gene ID** 1965**Other Names**

Dmel\CG6376 ;Dmel_CG6376 ;drosE2F1 ;E(Sev-CycE)3A ;E(var)3-93E ;E2-promoter binding facto
;E2F 1 ;E2F transcription factor 1 ;E2F-1 ;E2f-PA ;E2f-PB ;E2f-PC ;E2F1 ;E2f1 E2F transcription
factor 1 ;E2F1_HUMAN ;Evar(3)164 ;KIAA4009 ;l(3)07172 ;l(3)j3B1 ;l(3)j3C2 ;l(3)rM729 ;mKIAA4009
;OTTHUMP00000030661 ;PBR3 ;PRB binding protein E2F 1 ;PRB-binding protein E2F-1 ;RBAP 1
;RBAP-1 ;RBAP1 ;RBBP-3 ;RBBP3 ;RBP 3 ;RBP3 ;Retinoblastoma-associated protein 1
;Retinoblastoma-binding protein 3 ;Transcription factor E2F1.

Format

PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

eIF2 α Antibody - 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). This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form a 43S pre-initiation complex (43S PIC) (PubMed: 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). 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}

eIF2 α 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](#)

eIF2 α Antibody - Images

eIF2 α 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.

eIF2 α Antibody - 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).