



## eIF2 $\alpha$ mouse mAb

<b>Catalog No</b>	YP-Ab-03476
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	WB;IF;IP
<b>Gene Name</b>	eif2s1
<b>Protein Name</b>	
<b>Immunogen</b>	Purified recombinant human eIF2 $\alpha$ protein fragments expressed in E.coli.
<b>Specificity</b>	This antibody detects endogenous levels of eIF2 $\alpha$ and does not cross-react with related proteins.
<b>Formulation</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source</b>	Monoclonal, Mouse
<b>Purification</b>	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	wb dilution 1:1000 icc dilution 1:200. IF 1:50-200
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	$\geq 90\%$
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	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.
<b>Observed Band</b>	38kD
<b>Cell Pathway</b>	Cytoplasm, Stress granule . Colocalizes with NANOS3 in the stress granules. .
<b>Tissue Specificity</b>	B cells,Brain,Fibroblast,Placenta,
<b>Function</b>	function: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. PTM: Substrate for at least 4 kinases: EIF2AK3/PERK, GCN2, HRI and PKR. Phosphorylation stabilizes the eIF-2/GDP/eIF-2B complex and prevents GDP/GTP exchange reaction, thus impairing the recycling of eIF-2 between successive rounds of initiation and leading to global inhibition of translation. In case of infection by vaccinia virus or rotavirus

### Background

The translation initiation factor EIF2 catalyzes the first regulated step of protein synthesis initiation, promoting the binding of the initiator tRNA to 40S ribosomal subunits. Binding occurs as a ternary complex of methionyl-tRNA, EIF2, and GTP. EIF2 is composed of 3 nonidentical subunits, the 36-kD EIF2-alpha subunit (EIF2S1), the 38-kD EIF2-beta subunit (EIF2S2; MIM 603908), and the 52-kD EIF2-gamma subunit (EIF2S3; MIM 300161). The rate of formation of the ternary complex is modulated by the phosphorylation state of EIF2-alpha (Ernst et al., 1987 [PubMed 2948954]). [supplied by OMIM, Feb 2010],

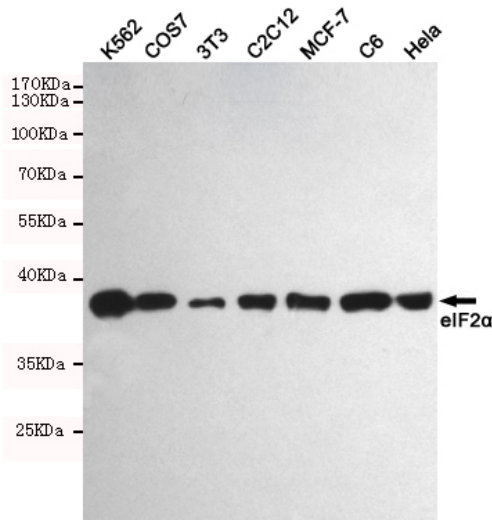
### matters needing attention

Avoid repeated freezing and thawing!

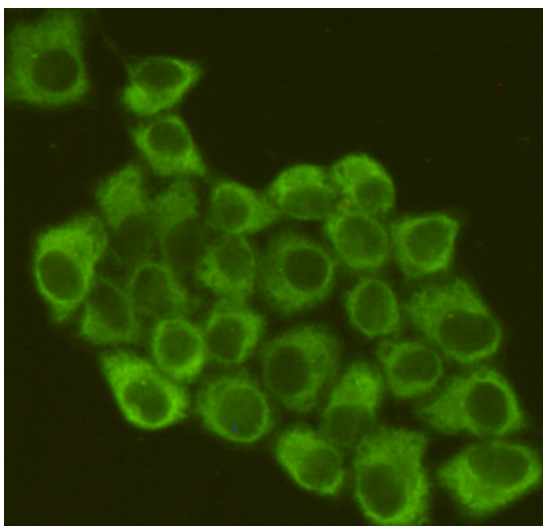
### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

## Products Images



Western blot detection of eIF2 $\alpha$  in K562, COS7, 3T3, C2C12, MCF-7, C6 and HeLa cell lysates using eIF2 $\alpha$  mouse mAb (1:1000 diluted). Predicted band size: 38KDa. Observed band size: 38KDa.



Immunofluorescent analysis of HeLa cells fixed by anhydrous methanol for 2 h at -20°C and using anti-eIF2 $\alpha$  mouse mAb (dilution 1:200).



Ctrl IgG IP: - +  
eIF2α IP: + -

Immunoprecipitation analysis of HeLa cell lysates using eIF2α.

