



eIF2α mouse mAb

Catalog No	YP-Ab-03476
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB;IF;IP
Gene Name	eif2s1
Immunogen	Purified recombinant human eIF2α protein fragments expressed in E.coli.
Specificity	This antibody detects endogenous levels of eIF2α and does not cross-react with related proteins.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Monoclonal, Mouse
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Dilution	wb dilution 1:1000 icc dilution 1:200. IF 1:50-200
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	EIF2;EIF-2;EIF2A;EIF-2A;EIF-2alpha;eIF2α;eif2s1;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.
Observed Band	38kD
Calculated Molecular Weight	38kD
Cell Pathway	Cytoplasm, Stress granule . Colocalizes with NANOS3 in the stress granules. .
Tissue Specificity	B cells,Brain,Fibroblast,Placenta,
Function	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!

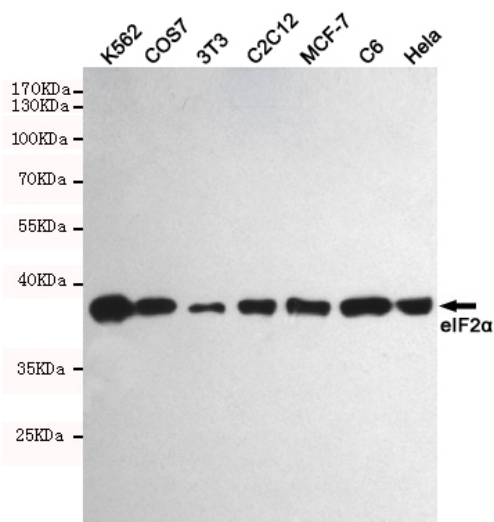
Usage suggestions

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

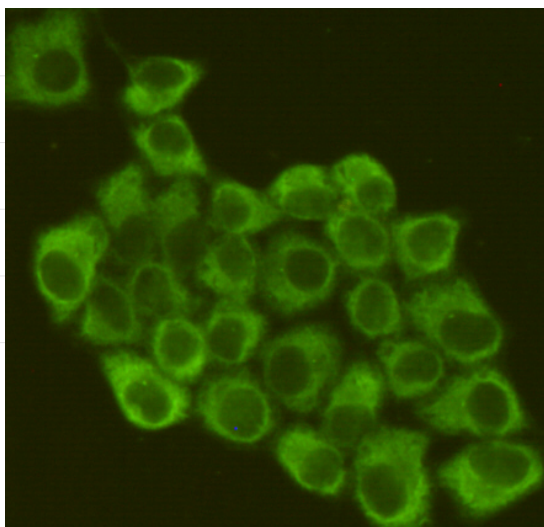


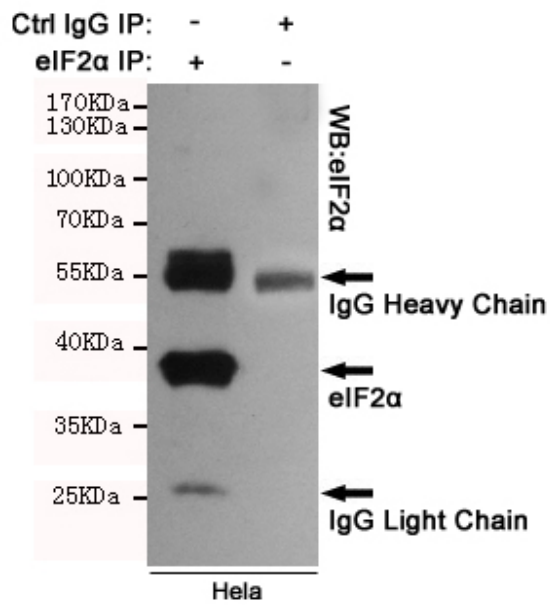
Products Images

Western blot detection of eIF2 α in K562, COS7, 3T3, C2C12, MCF-7, C6 and HeLa cell lysates using eIF2 α 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 $^{\circ}$ C and using anti-eIF2 α mouse mAb (dilution 1:200).





Immunoprecipitation analysis of HeLa cell lysates using eIF2α.