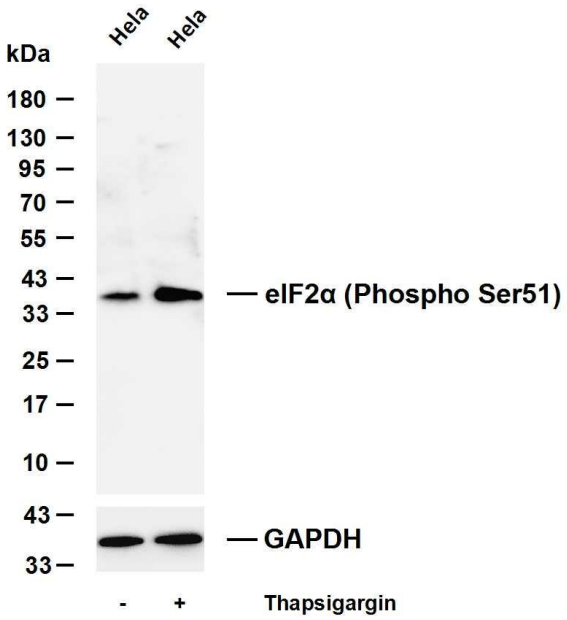
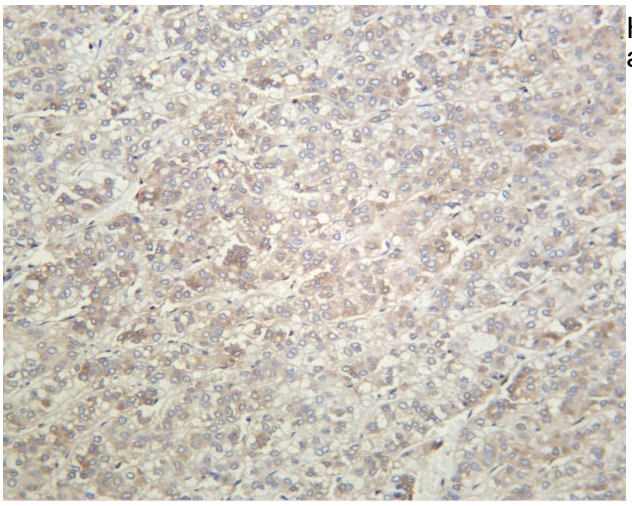
eIF2α (Phospho Ser51) Rabbit mAb

Catalog No	YP-rAb-18386
Isotype	IgG
Reactivity	Human,Mouse,Rat,Chicken,Pig,Fish,Dog
Applications	WB,IHC,IF,ELISA
Gene Name	EIF2S1
Protein Name	Eukaryotic translation initiation factor 2 subunit 1
Purification Process	Protein A
Specificity	eIF2α (Phospho Ser51) Monoclonal Antibody detects endogenous levels of eIF2α protein only when phosphorylated at S51.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):ELsRR
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:100-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	EIF2S1 ; EIF2A ; Eukaryotic translation initiation factor 2 subunit 1 ; Eukaryotic translation initiation factor 2 subunit alpha ; eIF-2-alpha ; eIF-2A ; eIF-2alpha
Observed Band	36kD
Calculated Molecular Weight	36kD
Cell Pathway	Cytoplasm, Stress granule . Colocalizes with NANOS3 in the stress granules. .
Tissue Specificity	B cells,Brain,Fibroblast,Placenta,
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

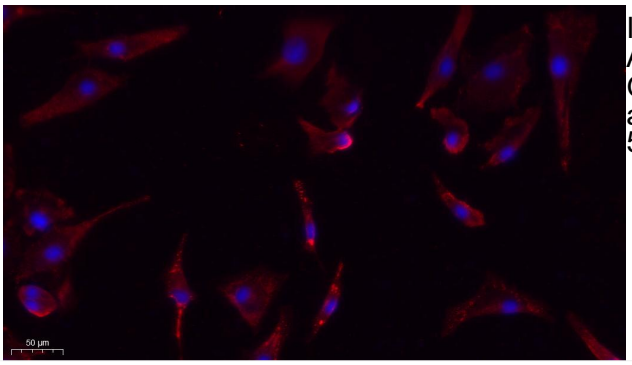
	eIF-2 to recycle and catalyze another round of initiation, the GDP bound to eIF-2 must exchange with GTP by way of a reaction catalyzed by eIF-2B.,PTM:Substrate for at least 4 kinases: EIF2AK3/PERK, GCN2, HRI and PKR. Phosphorylation stabilizes the eIF-2/GDP/eIF-2B complex and prevents GDP/GTP exchange 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 A, eIF2S1 phosphorylation state is modulated.,similarity:Belongs to the eIF-2-alpha family.,similarity:Contains 1 S1 motif domain.,subunit:Heterotrimer composed of an alpha, a beta and a gamma chain. Component of an EIF2 complex at least composed of CUGBP1, CALR, CALR3, EIF2S1, EIF2S2, HSP90B1 and HSPA5.,
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.



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-eIF2α (Phospho Ser51) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: Hela was treated with Thapsigargin(300nM) for 30 minutes Predicted band size: 36kDa Observed band size: 36kDa



Human hepatocellular carcinoma was stained with anti-eIF2α (Phospho Ser51) Rabbit antibody



Immunofluorescence analysis of A549. 1,primary Antibody(red) was diluted at 1:200(4℃ overnight). 2, Goat Anti Rabbit IgG (H&L) - Alexa Fluor 594 Secondary antibody was diluted at 1:1000(room temperature, 50min).3, DAPI(blue) 10min.