

**P-eIF2 $\alpha$  (S51) Rabbit mAb [0M37]**

**Cat NO. :A17637**

**Information:**

Applications	Reactivity:	UniProt ID:	MW(kDa)	Host	Isotype	Size
WB	H,M,R	P05198	38 kDa	Rabbit	IgG	100ul,200ul

**Applications detail:**

Application	Dilution
WB	1:1000-2000
The optimal dilutions should be determined by the end user	

**Conjugate:**

UnConjugate

**Form:**

Liquid

**sensitivity:**

Endogenous

**Purification:**

Protein A purification

**Specificity:**

Antibody is produced by immunizing animals with a synthetic peptide at the sequence of Human Phospho-eIF2 $\alpha$  (Ser51)

**Storage buffer and conditions:**

Antibody store in 10 mM PBS, 0.5mg/ml BSA, 50% glycerol (buffer) .

Shipped at 4°C. Store at-20°C or -80°C.

Products are valid for one natural year of receipt.Avoid repeated freeze / thaw cycles.

**Tissue specificity:**

**Subcellular location:**

Cytoplasm, Stress granule.

**Function:**

**Introduction:** **WB:** Western Blot **IP:** Immunoprecipitation **IHC:** Immunohistochemistry **ChIP:** Chromatin Immunoprecipitation **ICC/IF:** Immunocytochemistry/Immunofluorescence **F:** Flow Cytometry

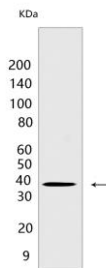
**Cross Reactivity:** **H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Ml:** mink **C:** chicken **Dm** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Hr:** horse

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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)..

## Validation Data:

### P-eIF2 $\alpha$ (S51) Rabbit mAb [0M37] Images



Western blot (SDS PAGE) analysis of extracts from HeLa cells. Using P-eIF2  $\alpha$  (S51) Rabbit mAb [0M37] at dilution of 1:1000 incubated at 4°C overnight.

View more information on <http://naturebios.com>

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 1% w/v Milk, 1X TBST at 4°C overnight.