



Rabbit Anti-phospho-EIF2S1 (Ser49) antibody

SL14541R

Product Name:	phospho-EIF2S1 (Ser49)
Chinese Name:	磷酸化真核启动因子2 α 抗体
Alias:	EIF2S1 (phospho S49); EIF2S1 (phospho-Ser49); EIF 2 alpha; EIF 2; EIF 2A; EIF 2alpha; eIF-2-alpha; eIF-2A; EIF-2alpha; EIF2 alpha; EIF2; EIF2A; EIF2S1; Eukaryotic translation initiation factor 2 subunit 1 alpha 35kDa; Eukaryotic translation initiation factor 2 subunit 1 alpha; Eukaryotic translation initiation factor 2 subunit 1; Eukaryotic translation initiation factor 2 subunit alpha; IF2A_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	36kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human EIF2S1 around the phosphorylation site of Ser49:LL(p-S)EL
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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]

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.

Subcellular Location:

Cytoplasmic granule. The cytoplasmic granules are stress granules which are a dense aggregation in the cytosol composed of proteins and RNAs that appear when the cell is under stress. Colocalizes with NANOS3 in the stress granules.

Post-translational modifications:

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.
Contains 1 S1 motif domain.

SWISS:

P05198

Gene ID:

1965

Database links:

[Entrez Gene: 1965](#) Human

[Entrez Gene: 13665](#) Mouse

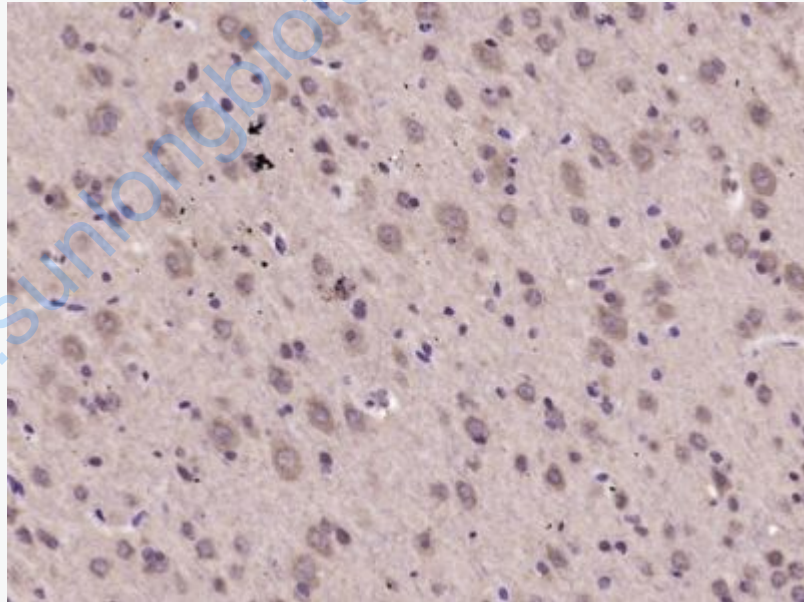
[Entrez Gene: 54318](#) Rat

[Omin: 603907](#) Human
[SwissProt: P05198](#) Human
[SwissProt: Q6ZWX6](#) Mouse
[SwissProt: P68101](#) Rat
[Unigene: 151777](#) Human
[Unigene: 196220](#) Mouse
[Unigene: 1488](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by microwave in sodium citrate buffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3% BSA) at RT for 30min; Antibody incubation with (phospho-EIF2S1 (Ser49)) Polyclonal Antibody, Unconjugated (SL14541R) at 1:400 overnight at 4°C, followed by conjugation to the

	secondary antibody (labeled with HRP) and DAB staining.
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