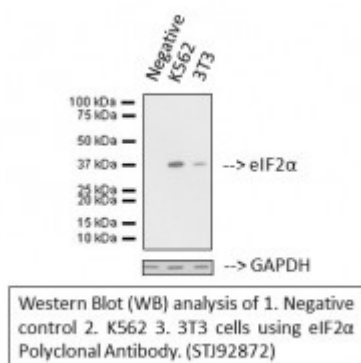


Anti-eIF alpha antibody



Description

eIF2alpha is a protein encoded by the EIF2S1 gene which is approximately 36,1 kDa. eIF2alpha is localised to cytoplasmic granules. It is involved in viral mRNA translation, influenza A, translation factors, regulation of lipid metabolism and insulin signalling-generic cascades. It is an enzyme that catalyses the removal of phosphate groups from serine and/or threonine residues by hydrolysis of phosphoric acid monoesters. They oppose the action of kinases and phosphorylases and are involved in signal transduction. eIF2alpha is expressed in the liver, nervous system, lung, blood and kidney. Mutations in the EIF2S1 gene may result in Wolcott-Rallison syndrome and fatty liver disease. STJ92872 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This polyclonal antibody detects endogenous levels of eIF2alpha protein.

Model	STJ92872
Host	Rabbit
Reactivity	Human, Mouse, Rat, Simian
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human eIF2alpha around the non-phosphorylation site of S51.
Immunogen Region	30-110 aa
Gene ID	1965
Gene Symbol	EIF2S1
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:10000

Specificity	eIF2alpha Polyclonal Antibody detects endogenous levels of eIF2alpha protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Eukaryotic translation initiation factor 2 subunit 1 Eukaryotic translation initiation factor 2 subunit alpha eIF-2-alpha eIF-2A eIF-2alpha
Molecular Weight	38 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:3265OMIM:603907
Alternative Names	Eukaryotic translation initiation factor 2 subunit 1 Eukaryotic translation initiation factor 2 subunit alpha eIF-2-alpha eIF-2A eIF-2alpha
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.
Cellular Localization	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: EIF2AK1/HRI, EIF2AK2/PKR, EIF2AK3/PERK and EIF2AK4/GCN2. 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 . Phosphorylated; phosphorylation on Ser-52 by the EIF2AK4/GCN2 protein kinase occurs in response to amino acid starvation and UV irradiation .