ARG51760
anti-eIF2 alpha phospho (Ser51) antibody

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes eIF2 alpha phospho (Ser51)
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	eIF2 alpha
Species	Human
Immunogen	Peptide sequence around phosphorylation site of serine 51 (E-L-S(p)-R-R) derived from Human eIF2α.
Conjugation	Un-conjugated
Alternate Names	eIF-2alpha; EIF-2A; Eukaryotic translation initiation factor 2 subunit 1; EIF2; EIF-2alpha; EIF2A; eIF-2-alpha; Eukaryotic translation initiation factor 2 subunit alpha; eIF-2A; EIF-2

Application Instructions

Application table

Application	Dilution
ICC/IF	1:100 - 1:200
IHC-P	1:50 - 1:100
WB	1:500 - 1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

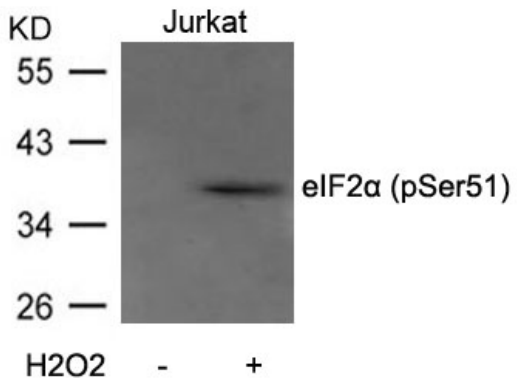
Form	Liquid
Purification	Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic phosphopeptide. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. In addition, non-phospho specific antibodies were removed by chromatogramphy using non-phosphopeptide.
Buffer	PBS (without Mg2+ and Ca2+, pH 7.4), 150mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw

	cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

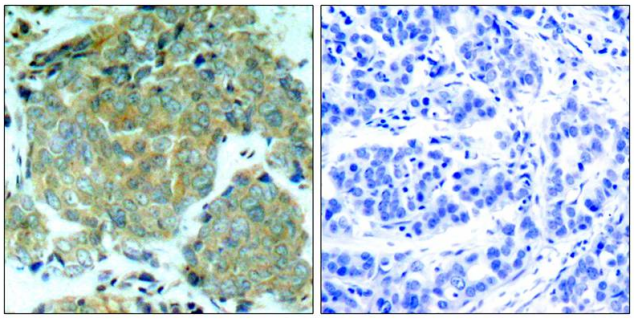
Gene Symbol	EIF2S1
Gene Full Name	eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa
Background	Functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA. This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form a 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.
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. [UniProt]
Research Area	Gene Regulation antibody
Calculated Mw	36 kDa
PTM	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 (PubMed:15207627, PubMed:18032499). Phosphorylated; phosphorylation on Ser-52 by the EIF2AK4/GCN2 protein kinase occurs in response to amino acid starvation and UV irradiation (By similarity).

Images



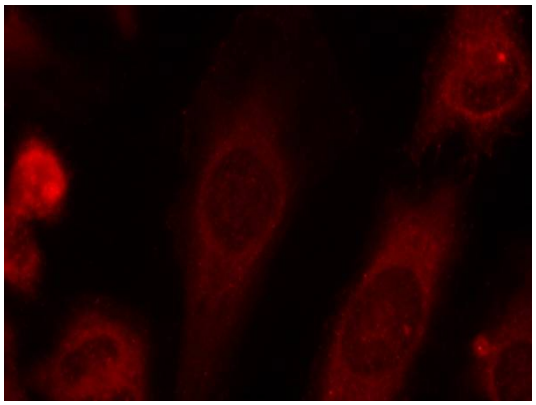
ARG51760 anti-eIF2 alpha phospho (Ser51) antibody WB image

Western blot: Extracts from Jurkat cells untreated or treated with H2O2 stained with ARG51760 anti-eIF2 alpha phospho (Ser51) antibody.



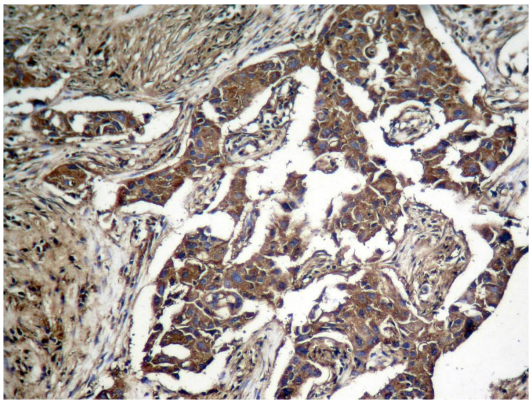
ARG51760 anti-eIF2 alpha phospho (Ser51) antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human breast carcinoma tissue stained with ARG51760 anti-eIF2 alpha phospho (Ser51) antibody (left) or the same antibody preincubated with blocking peptide (right).



ARG51760 anti-eIF2 alpha phospho (Ser51) antibody ICC/IF image

Immunofluorescence: methanol-fixed HeLa cells stained with ARG51760 anti-eIF2 alpha phospho (Ser51) antibody.



ARG51760 anti-eIF2 alpha phospho (Ser51) antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human lung carcinoma tissue, stained with ARG51760 anti-eIF2 alpha phospho (Ser51) antibody.