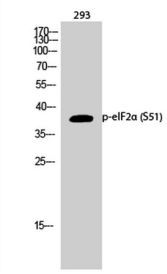
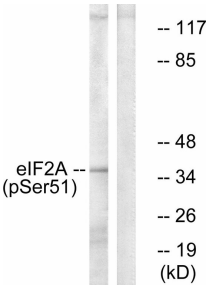
Product Data Sheet: Phospho-eIF2α (S51)

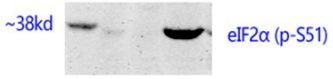
Cat. No:	ABP-0745
Conjugate:	Unconjugated
Size:	100 ug
Clone:	Poly
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Reactivity:	Hu, Ms, Rt
Applications:	Western blotting 1:500-1000 Immunoprecipitation: 1:50-1:100 Immunofluorescence: 1:50-1:200
Molecular Weight:	38 kDa
Purification:	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser51 of human eIF2alpha. Antibodies are purified by protein A and peptide affinity chromatography.
Background:	Phosphorylation of the eukaryotic initiation factor 2 (eIF2) a subunit is a well-documented mechanism to downregulate protein synthesis under a variety of stress conditions. Eukaryotic initiation factor 2 binds GTP and Met-tRNAi and transfers Met-tRNA to the 40S subunit to form the 43S preinitiation complex (1,2). eIF2 promotes a new round of translation initiation by exchanging GDP for GTP, a reaction catalyzed by eIF2B (1,2). Kinases that are activated by viral infection (PKR), endoplasmic reticulum stress (PERK/PEK), amino acid deprivation (GCN2) or heme deficiency (HRI) can phosphorylate the a subunit of eIF2 (3,4). This phosphorylation stabilizes the eIF2-GDP-eIF2B complex and inhibits the turnover of eIF2B. Induction of PKR by IFN-y and TNF-a induces potent phosphorylation of eIF2a at Ser51 (5,6).: Phospho-eIF2alpha (Ser51) Anti¬body detects endogenous eIF2alpha only when phosphory¬lated at Ser51. The antibody does not recognize eIF2alpha phosphorylated at other sites.
Form:	liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Storage:	Store at –20°C. Avoid freeze / thaw cycles.



Western blot analysys of 293 cells Using Phospho-EIF2 (S51) Alpha Polyclonal antibody diluted at 1:1000

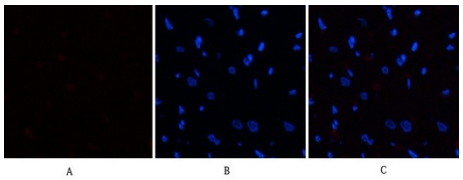


Western Blot analysys of lysates from K562 cells treated in IFN- alpha 1000ul/ml 18h, using EIF2 alpha (Phospho Ser51) Antibody. The lane on the right is blocked with the Phospho

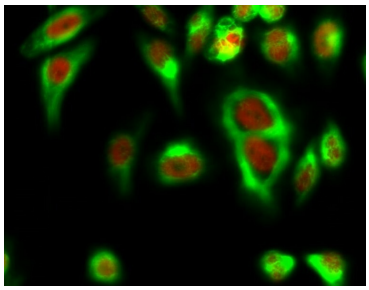


1. Dilution of primary antibody: 1:1,000
2. Dilution of primary antibody: 1:500
Short Protocol: Phospho-EIF2a, cell lysis was loaded at 30ug/lane. Dilution at 1:500 and incubated at 4°C overnight. The secondary antibody was diluted at 1:10,000 and incubated at 37°C 1hour. Detection used: ECL West Pico Plus cat. ECL-2001. With other systems the researcher must optimize dilutions

peptide.



Immunofluorescence analysis of rat-heart tissue. 1,eIF2α (phospho Ser51) Polyclonal Antibody(red) was diluted at 1 :200 (4°C,overnight). 2, Cy3 labled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3. Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunofluorescence analysis of HeLa cell 1,Eif2Alpha (phospho Ser51) Polyclonal Antibody (red) was diluted at 1:200 (4°C overnight. P53 monoclonal antibody (6C4) (green) was diluted at 1:200 (4°C overnight). 2, Goat Anti-Rabbit Alexa Fluor 594 diluted at 1:1000 room temperature, 50 min. Goat anti mouse Alexa Fluor 488 diluted at 1:1000 room temperature, 50 min.