For Research Use Only

EIF2S1 Recombinant antibody

Catalog Number:82936-1-RR

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Basic Information

Catalog Number:
82936-1-RR

Concentration:
1000 μg/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG1645

GenBank Accession Number:
BC002513

GeneID (NCBI):
1965

UNIPROT ID:
P05198

Full Name:
eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa

Calculated MW:
36 kDa

Observed MW:
36 kDa

Purification Method:
Protein A purification

CloneNo.:
230245A12

Recommended Dilutions:
WB: 1:5000-1:50000
IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC: 1:250-1:1000
IF/ICC: 1:500-1:2000
FC (Intra): 0.25 ug per 10^6 cells in a 100 μl suspension

Applications

Tested Applications:
WB, IHC, IF/ICC, FC (Intra), IP, ELISA

Species Specificity:
human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : HeLa cells, NIH/3T3 cells, HepG2 cells, A549 cells, Jurkat cells, K-562 cells, HSC-T6 cells

IP : HepG2 cells,

IHC : mouse brain tissue,

IF/ICC : HepG2 cells,

FC (Intra) : HeLa cells, MCF-7 cells

Background Information

EIF2S1 is one subunit of the translation initiation factor EIF2, which catalyzes the first regulated step of protein synthesis initiation, promoting the binding of the initiator tRNA to 40S ribosomal subunits. 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. EIF2A (Gene ID: 83939) and EIF2S1 (Gene ID: 1965) share the EIF2A symbol/alias in common. EIF2S1 is the alpha subunit of the eIF2 translation initiation complex. Although both of these proteins function in binding initiator tRNA to the 40S ribosomal subunit, the EIF2A protein does so in a codon-dependent manner, whereas eIF2 complex requires GTP.

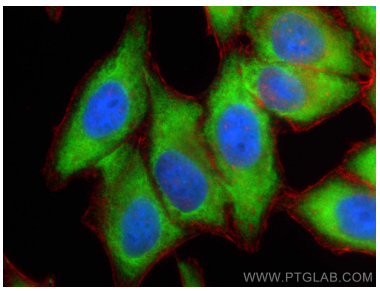
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

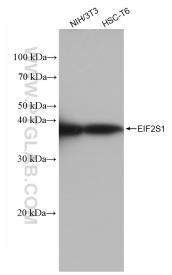
For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

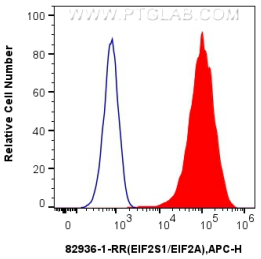
Selected Validation Data



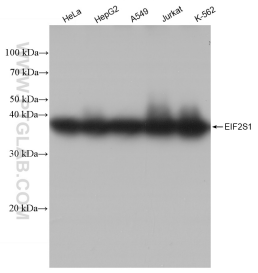
Immunofluorescent analysis of (-20°C Ethanol) fixed HepG2 cells using EIF2S1 antibody (82936-1-RR, Clone: 230245A12) at dilution of 1:1000 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-phalloidin (red).



Various lysates were subjected to SDS PAGE followed by western blot with 82936-1-RR (EIF2S1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



1x10^6 HeLa cells were intracellularly stained with 0.25 ug Anti-Human EIF2S1 (82936-1-RR, Clone:230245A12) and APC-Conjugated Goat Anti-Rabbit IgG(H+L)(red), or 0.25 ug Rabbit IgG control Rabbit PolyAb (30000-0-AP) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



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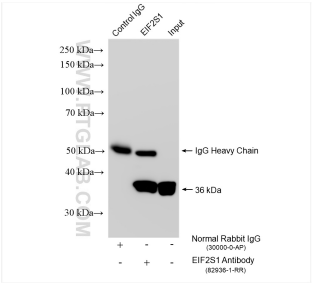
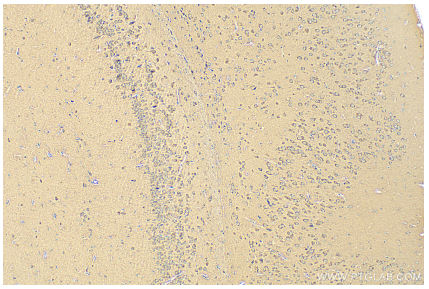
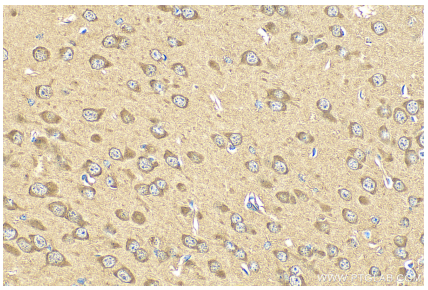


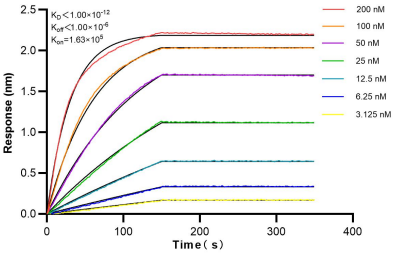
IP result of anti-EIF2S1 (IP:82936-1-RR, 4ug; Detection:82936-1-RR 1:3000) with HepG2 cells lysate 1470 ug.



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 82936-1-RR (EIF2S1 antibody) at dilution of 1:500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 82936-1-RR (EIF2S1 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Biolayer interferometry (BLI) kinetic assays of 82936-1-RR against Human EIF2S1 were performed. The affinity constant is below 1 pM.