For Research Use Only

EIF2S1/EIF2A Polyclonal antibody

Catalog Number:11170-1-AP 31 Publications

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Basic Information

Catalog Number:
11170-1-AP

Size:
150ul , Concentration: 450 μg/ml by Nanodrop and 267 μg/ml by Bradford method using BSA as the standard;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG1645

GenBank Accession Number:
BC002513

GeneID (NCBI):
1965

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

Calculated MW:
36 kDa

Observed MW:
36 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:5000-1:50000
IP 0.5-4.0 ug for IP and 1:500-1:2000 for WB
IHC 1:20-1:200
IF 1:20-1:200

Applications

Tested Applications:
FC, IF, IHC, IP, WB, ELISA

Cited Applications:
IHC, WB

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, pig, 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 : HepG2 cells, Jurkat cells, MCF-7 cells, NIH/3T3 cells

IP : HepG2 cells,

IHC : human colon cancer tissue,

IF : HepG2 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.

Notable Publications

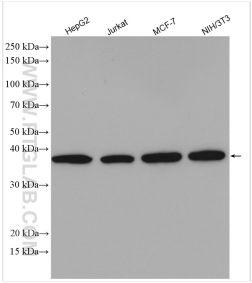
Author	Pubmed ID	Journal	Application
Yu Sun	34562065	J Cell Mol Med	WB
Liguo Yang	32943607	Cell Death Dis	WB
Tongtong Liu	34530836	J Neuroinflammation	WB

Storage

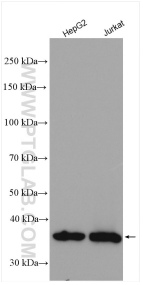
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 11170-1-AP (EIF2S1/EIF2A antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



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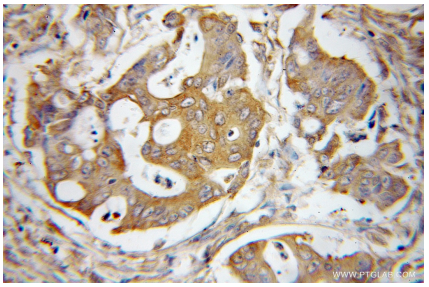
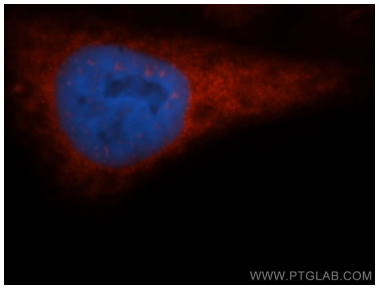
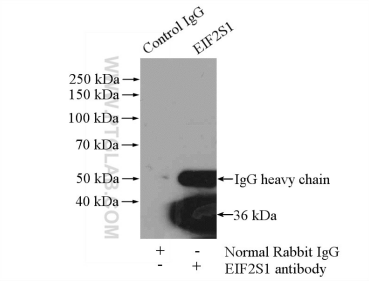


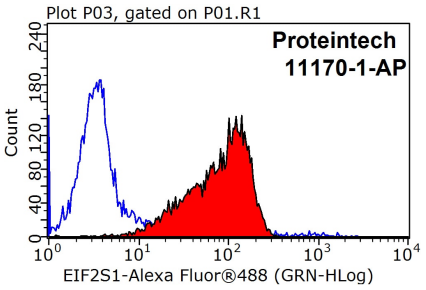
Immunohistochemical analysis of paraffin-embedded human colon cancer using 11170-1-AP (EIF2S1 antibody) at dilution of 1:50 (under 10x lens).



Immunofluorescent analysis of HepG2 cells, using EIF2S1 antibody 11170-1-AP at 1:50 dilution and Rhodamine-labeled goat anti-rabbit IgG (red). Blue pseudocolor = DAPI (fluorescent DNA dye).



IP Result of anti-EIF2S1 (IP:11170-1-AP, 4ug; Detection:11170-1-AP 1:1000) with HepG2 cells lysate 2400ug.



1X10^6 HepG2 cells were stained with .2ug EIF2S1 antibody (11170-1-AP, red) and control antibody (blue). Fixed with 90% MeOH blocked with 3% BSA (30 min). Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) with dilution 1:1000.