For Research Use Only

Phospho-EIF2S1 (Ser51) Monoclonal antibody

Catalog Number:68023-1-Ig

7 Publications

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Basic Information

Catalog Number:
68023-1-Ig

Concentration:
1000 ug/ml

Source:
Mouse

Isotype:
IgG1

GenBank Accession Number:
NM_004094

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 G purification

CloneNo.:
1A4A11

Recommended Dilutions:
WB 1:5000-1:50000
IF/ICC 1:400-1:1600

Applications

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

Cited Applications:
WB

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse

Positive Controls:

WB : PC-3 cells, HeLa cells, Calyculin A treated HEK-293 cells, NIH/3T3 cells, HSC-T6 cells, Calyculin A treated HeLa cells, Calyculin A treated PC-3 cells, Calyculin A treated NIH/3T3 cells, Calyculin A treated HSC-T6 cells

IF/ICC : Calyculin A treated HeLa 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. This phosphorylation stabilizes the eIF2-GDP-eIF2B complex and inhibits the turnover of eIF2B. Induction of PKR by IFN-γ and TNF-α induces potent phosphorylation of eIF2α at Ser51.

Notable Publications

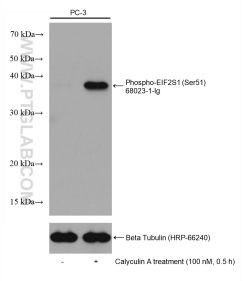
Author	Pubmed ID	Journal	Application
Xiaofan Sun	39905002	Nat Commun	WB
Zhichao Wang	39053076	Microbiol Res	WB
Yunlong Lu	38870830	Eur J Med Chem	WB

Storage

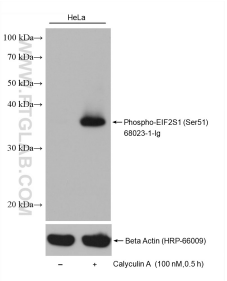
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

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

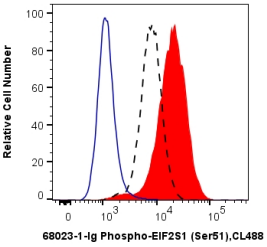
Selected Validation Data



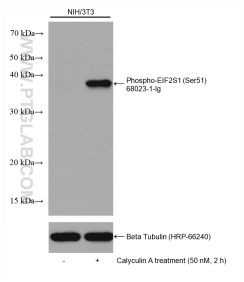
Non-treated and Calyculin A treated PC-3 cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Tubulin (HRP-66240) antibody as loading control.



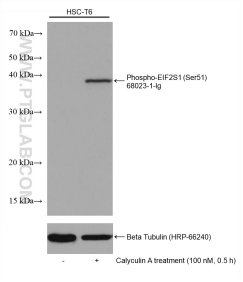
Non-treated and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Actin (HRP-66009) antibody as loading control.



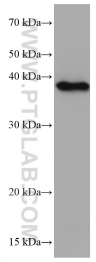
1X10^6 PC-3 cells untreated (dashed lines) or treated with Calyculin A (red) were intracellularly stained with 0.5 ug Anti-Human Phospho-EIF2S1 (Ser51) (68023-1-Ig, Clone:1A4A11) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000, or 0.5 ug Control Antibody (blue). Cells were fixed with 4% PFA and permeabilized with 90% MeOH.



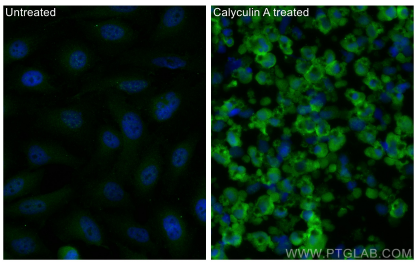
Non-treated and Calyculin A treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Tubulin (HRP-66240) antibody as loading control.



Non-treated and Calyculin A treated HSC-T6 cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Tubulin (HRP-66240) antibody as loading control.



Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed Calyculin A treated HeLa cells using Phospho-EIF2S1 (Ser51) antibody (68023-1-Ig, Clone: 1A4A11) at dilution of 1:800 and Multi-rAb CoraLite ® Plus 488-Goat Anti-Mouse Recombinant Secondary Antibody (H+L) (RGAM002).