

For Research Use Only

Phospho-EIF2S1 (Ser51) Monoclonal antibody

Catalog Number: 68023-1-Ig **8 Publications**



Basic Information

| | | |
|--|---|---|
| Catalog Number: 68023-1-Ig | GenBank Accession Number: NM_004094 | Purification Method: Protein G purification |
| Size: 100ul , Concentration: 1000 ug/ml by Nanodrop; | GeneID (NCBI): 1965 | CloneNo.: 1A4A11 |
| Source: Mouse | UNIPROT ID: P05198 | Recommended Dilutions: WB 1:5000-1:50000 IF/ICC 1:400-1:1600 |
| Isotype: IgG1 | Full Name: eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa | |
| | Calculated MW: 36 kDa | |
| | Observed MW: 36 kDa | |

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 eIF-2-GDP-eIF2B complex and inhibits the turnover of eIF2B. Induction of PKR by IFN- γ and TNF- α induces potent phosphorylation of eIF2 α at Ser51.

Notable Publications

| Author | Pubmed ID | Journal | Application |
|--------------|-----------|---------------|-------------|
| Xiaofan Sun | 39905002 | Nat Commun | WB |
| Yue Huang | 39706273 | J Biol Chem | WB |
| Zhichao Wang | 39053076 | Microbiol Res | WB |

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

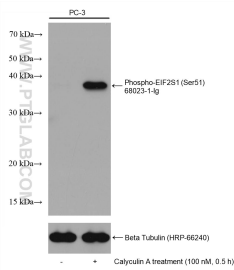
Aliquoting is unnecessary for -20°C storage

***** 20ul sizes contain 0.1% BSA**

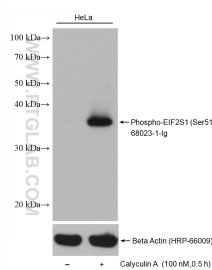
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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

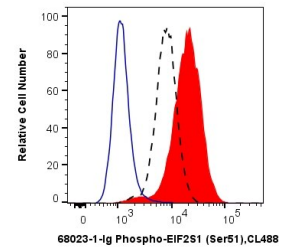
Selected Validation Data



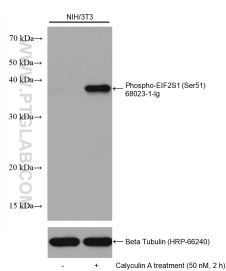
Non-treated and Calyculin A treated PC-3 cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Tubulin (HRP-66240) antibody as loading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



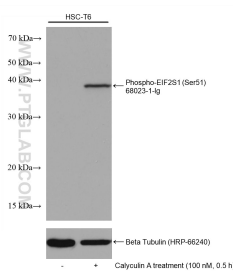
Non-treated and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Actin (HRP-66009) antibody as loading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



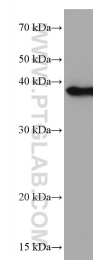
1X10⁶ PC-3 cells untreated (dashed lines) or treated with Calyculin A (red) were intracellularly stained with 0.5 ug Anti-Human Phospho-EIF2S1 (Ser51) (68023-1-Ig, Clone:1A4A11) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000, or 0.5 ug Control Antibody (blue). Cells were fixed with 4% PFA and permeabilized with 90% MeOH.



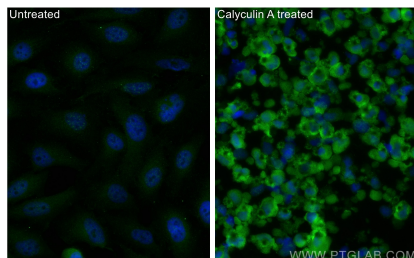
Non-treated and Calyculin A treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 68023-1-Ig (Phospho-EIF2S1 (Ser51) antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Tubulin (HRP-66240) antibody as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