[KD Validated] Anti-Phospho-4E-BP1 (Thr46) Rabbit mAb

Purified Recombinant Rabbit Monoclonal Antibody

Catalog # R020860

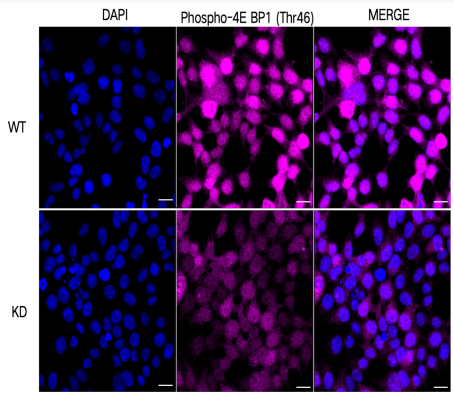
Product Information

Application	WB, FC, IF (Cell)/ICC
Reactivity	Human, Mouse, Rat
Dilution	WB 1:1,000~1:5,000; FC 1:200~1:2,000; IF 1:100~1:1,000
Host	Rabbit
Clonality	Monoclonal
Clone No.	21S74P12
Isotype	IgG
Label	Unconjugated
Immunogen	A synthesized peptide derived from human Phospho-4E-BP1 (Thr46)
Format	Affinity purified monoclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 12 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	[KD Validated] Anti-Phospho-4E-BP1 (Thr46) Rabbit mAb [21S74P12] is for research use only and not for use in diagnostic or therapeutic procedures.

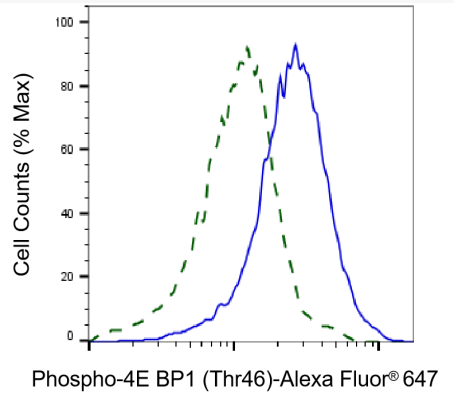
Protein Information

Synonyms	EIF4EBP1; Eukaryotic Translation Initiation Factor 4E Binding Protein 1; PHAS-I ; 4E-BP1; Phosphorylated Heat- And Acid-Stable Protein Regulated By Insulin 1; Eukaryotic Translation Initiation Factor 4E-Binding Protein 1; EIF4E-Binding Protein 1; 4EBP1; BP-1.
Calculated MW	Calculated MW: 13 kDa, Observed MW: 15-20 kDa
Uniprot ID	Q13541
Gene ID	1978
Background	Translation repressor protein 4E-BP1 (also known as PHAS-1) inhibits cap-dependent translation by binding to the translation initiation factor eIF4E. Hyperphosphorylation of 4E-BP1 disrupts this interaction and results in activation of cap-dependent translation. Both the PI3 kinase/Akt pathway and FRAP/mTOR kinase regulate 4E-BP1 activity.

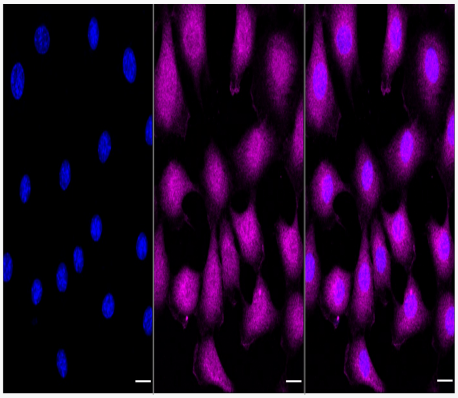
Validation Images



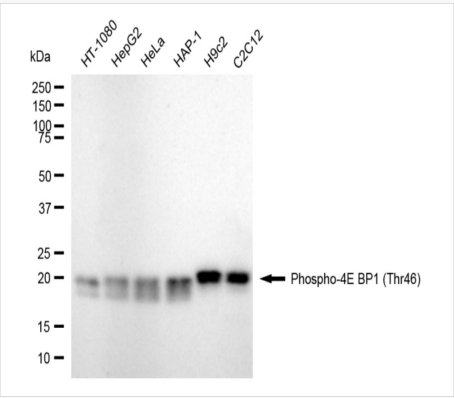
Immunocytochemical staining of HeLa cells using Phospho-4E BP1 (Thr46) antibody (R020860, 1:1,000), Top panel: wild-type (WT); Bottom panal: Phospho-4E BP1 (Thr46) shRNA knockdown (KD). Nuclei were stained blue with DAPI; Acyl-CoA dehydrogenase short chain was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



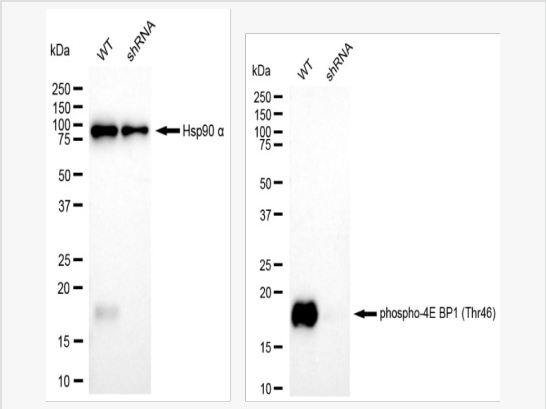
Flow cytometric analysis of phospho-4E BP1 (Thr46) expression in C2C12 cells using phospho-4E BP1 (Thr46) antibody (R020860, 1:2,000). Green, isotype control; red, phospho-4E BP1 (Thr46).



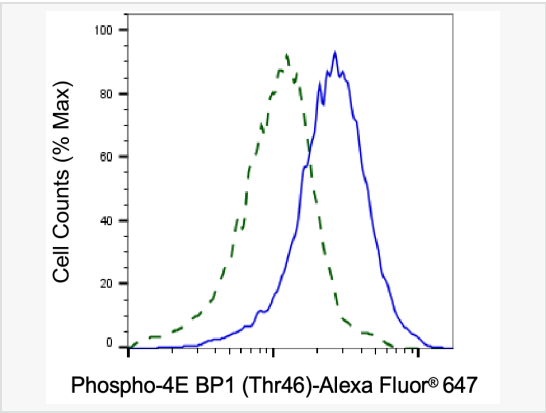
Immunocytochemical staining of C2C12 cells with Phospho-4E BP1 (Thr46) antibody (R020860, 1:1,000) . Nuclei were stained blue with DAPI; Phospho-4E BP1 (Thr46) was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.



Western blotting analysis using phospho-4E BP1 (Thr46) antibody (R020860). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with phospho-4E BP1 (Thr46) antibody (R020860, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



Western blotting analysis using phospho-4E BP1 (Thr46) antibody (R020860). Phospho-4E BP1 (Thr46) expression in wild-type (WT) and EIF4EBP1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with phospho-4E BP1 (Thr46) antibody (R020860, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit. EIF4EBP1, eukaryotic translation initiation factor 4E binding protein 1.



Validation of 4E BP1 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with Phospho-4E BP1 (Thr46) antibody (R020860, 1:2,000) and analyzed using BD flow cytometer.