

Product Name: KD-Validated Phospho-4E BP1 (Thr46) Recombinant Rabbit Monoclonal Antibody

Catalog #: KVA00787

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 12.6kDa

Antigen Information

Gene Name	EIF4EBP1 EIF4EBP1; Eukaryotic Translation Initiation Factor 4E Binding Protein 1; PHAS-I ; 4E-BP1;
Alternative Names	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
Gene ID	1978.0
SwissProt ID	Q13541
Immunogen	A synthesized peptide derived from human Phospho-4E BP1 (Thr46)

Background

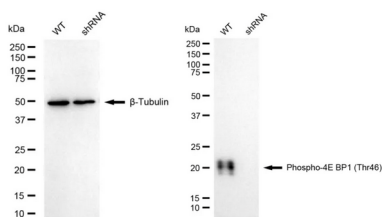
This gene encodes one member of a family of translation repressor proteins. The protein directly interacts with eukaryotic

translation initiation factor 4E (eIF4E), which is a limiting component of the multisubunit complex that recruits 40S ribosomal subunits to the 5' end of mRNAs. Interaction of this protein with eIF4E inhibits complex assembly and represses translation. This protein is phosphorylated in response to various signals including UV irradiation and insulin signaling, resulting in its dissociation from eIF4E and activation of mRNA translation. [provided by RefSeq, Jul 2008]

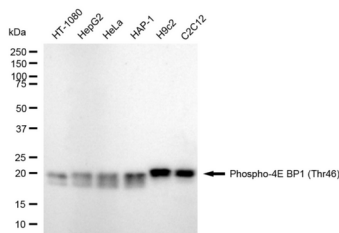
Research Area

Epigenetics and Nuclear Signaling, Metabolism

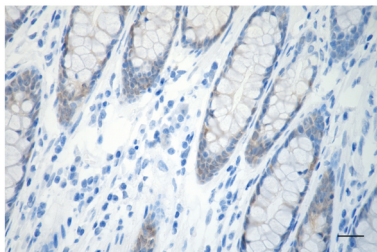
Image Data



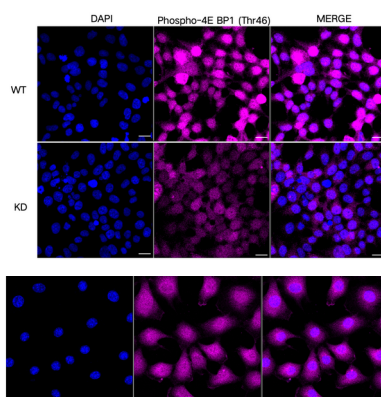
Western blotting analysis using phospho-4E BP1 (Thr46) antibody (KVA00787). Phospho-4E BP1 (Thr46) expression in wild-type (WT) and EIF4EBP1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with phospho-4E BP1 (Thr46) antibody (KVA00787, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively. EIF4EBP1, eukaryotic translation initiation factor 4E binding protein 1.



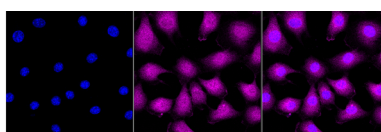
Western blotting analysis using phospho-4E BP1 (Thr46) antibody (KVA00787). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with phospho-4E BP1 (Thr46) antibody (KVA00787, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



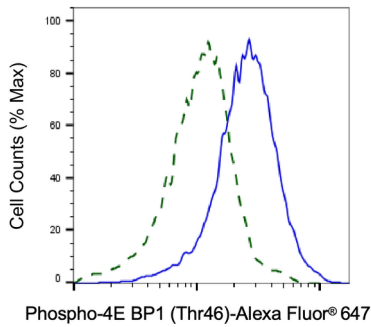
Immunohistochemistry was performed on paraffin-embedded human sigmoid colon carcinoma using phospho-4E BP1 (Thr46) antibody (KVA00787, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



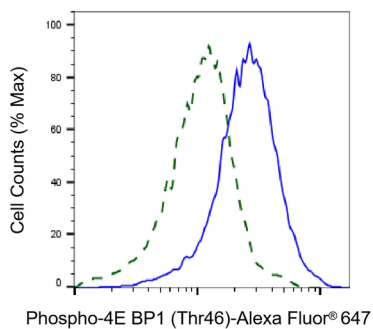
Immunocytochemical staining of HeLa cells using Phospho-4E BP1 (Thr46) antibody (KVA00787, 1:1,000). Top panel: wild-type (WT); Bottom panel: Phospho-4E BP1 (Thr46) shRNA knockdown (KD). Nuclei were stained blue with DAPI; Phospho-4E BP1 (Thr46) was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Immunocytochemical staining of C2C12 cells with Phospho-4E BP1 (Thr46) antibody (KVA00787, 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.



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 (KVA00787, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of phospho-4E BP1 (Thr46) expression in C2C12 cells using phospho-4E BP1 (Thr46) antibody (KVA00787, 1:2,000). Green, isotype control; red, phospho-4E BP1 (Thr46).