

Mouse anti-Human 4EBP1 Monoclonal Antibody | anti-EIF4EBP1 antibody

Anti-4EBP1 Antibody, Mouse Monoclonal

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA254153	Mouse	Human	Immunofluorescence, Immunocytochemistry, ELISA, Western Blot

PRODUCT SYNONYMS

4EBP1; Monoclonal Antibody; Anti-4EBP1 Antibody; Mouse Monoclonal; 4E-BP1/EIF4EBP1 Antibody; Mouse MAb; eukaryotic translation initiation factor 4E binding protein 1; Anti-4E-BP1 Antibody; Anti-BP-1 Antibody; Anti-PHAS-I Antibody; anti-EIF4EBP1 antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Number	5F3G9
Specificity	Human 4E-BP1/EIF4EBP1. No cross-reactivity in ELISA with E Coli cell lysate
Purity/Purification	Protein A
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-EIF4EBP1 antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA, WB (Western Blot)
Immunogen	Recombinant Human 4E-BP1/EIF4EBP1 Protein
Conjugation	Unconjugated
Preparation	This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Human 4E-BP1/EIF4EBP1 (rh 4E-BP1/EIF4EBP1). The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography .
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.

IMAGES



WB (Western Blot)

Anti-4EBP1 mouse monoclonal antibody at 1:500 dilution
Lane A: A431 Whole Cell Lysate
Lane B: K562 Whole Cell Lysate
Lysates/proteins at 30 ug per lane.
Secondary Goat Anti-Mouse IgG H&L (Dylight800) at 1/15000 dilution.
Developed using the Odyssey technique.
Performed under reducing conditions.
Predicted band size: 13 kDa
Observed band size: 13 kDa



IF (Immunofluorescence)

Immunofluorescence staining of Human 4EBP1 in Hela cells. Cells were fixed with 4% PFA, permeabilized with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with Mouse anti-Human 4EBP1 monoclonal antibody (1:300) at 37 degree C 1 hour. Then cells were stained with the Alexa Fluor 488-conjugated Goat Anti-mouse IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to nucleus and cytoplasm.

ADDITIONAL INFORMATION

Related Product Information for anti-EIF4EBP1 antibody	The translational suppressor eIF4E binding protein-1, 4E-BP1 functions as a key regulator in cellular growth, differentiation, apoptosis and survival. The Eif4ebp1 gene, encoding 4E-BP1, is a direct target of a transcription factor activating transcription factor-4 (ATF4), a master regulator of gene expression in stress responses. 4E-BP1 is characterized by its capacity to bind specifically to eIF4E and inhibit its interaction with eIF4G. Phosphorylation of 4E-BP1 regulates eIF4E availability, and therefore, cap-dependent translation, in cell stress. Binding of eIF4E to eIF4G is inhibited in a competitive manner by 4E-BP1. Phosphorylation of 4E-BP1 decreases the affinity of this protein for eIF4E, thus favouring the binding of eIF4G and enhancing translation. 4E-BP1 is important for beta-cell survival under endoplasmic reticulum (ER) stress. 4E-BP1 mediates the regulation of protein translation by hormones, growth factors and other stimuli that signal through the MAP kinase and mTORC1 pathways. Recently, 4E-BP1 was found to be a key factor, which converges several oncogenic signals, phosphorylates the molecules, and drives the downstream proliferative signals. Recent studies showed that high expression of phosphorylated 4E-BP-1 (p-4E-BP1) is associated with poor prognosis, tumor progression, or nodal metastasis in different human cancers.
Product Categories/Family for anti-EIF4EBP1 antibody	AKT Signaling Pathway
References	Azar R, et al. (2008) Phosphatidylinositol 3-kinase-dependent transcriptional silencing of the translational repressor 4E-BP1. Cell Mol Life Sci. 65(19): 3110-7. Tominaga R, et al. (2010) The JNK pathway modulates expression and phosphorylation of 4E-BP1 in MIN6 pancreatic beta-cells under oxidative stress conditions. Cell Biochem Funct. 28(5): 387-93. Ayuso MI, et al. (2010) New hierarchical phosphorylation pathway of the translational repressor eIF4E-binding protein 1 (4E-BP1) in ischemia-reperfusion stress. J Biol Chem. 285(45): 34355-63.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4758258
NCBI GeneID	1978
NCBI Accession #	NP_004086.1
NCBI GenBank Nucleotide #	NM_004095.3
UniProt Accession #	Q13541 ; Q6IBN3 ; B2R502 ; D3DSW8
Molecular Weight	12,580 Da
NCBI Official Full Name	eukaryotic translation initiation factor 4E-binding protein 1
NCBI Official Synonym Full Names	eukaryotic translation initiation factor 4E binding protein 1
NCBI Official Symbol	EIF4EBP1
NCBI Official Synonym Symbols	BP-1; 4EBP1; 4E-BP1; PHAS-I
NCBI Protein Information	eukaryotic translation initiation factor 4E-binding protein 1; eIF4E-binding protein 1; phosphorylated heat- and acid-stable protein regulated by insulin 1
UniProt Protein Name	Eukaryotic translation initiation factor 4E-binding protein 1
UniProt Gene Name	EIF4EBP1
UniProt Synonym Gene Names	4E-BP1; eIF4E-binding protein 1; PHAS-I
UniProt Entry Name	4EBP1_HUMAN

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/4ebp1-antibody-clone-5f3g9-immunofluorescence-immunocytochemistry-western-blot-elisa/254153>