

Rabbit 4E-BP1 Polyclonal Antibody | anti-4E-BP1 antibody

Phospho-4E-BP1 (Thr36) Antibody

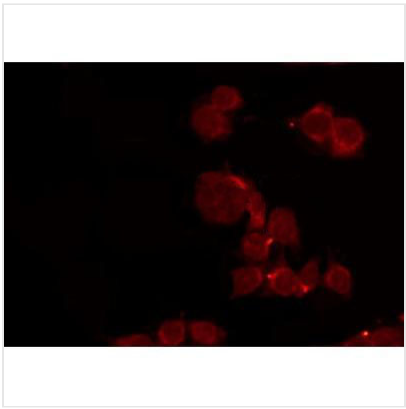
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329646	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

4E-BP1; Polyclonal Antibody; Phospho-4E-BP1 (Thr36) Antibody; 4EBP1; 4EBP1_HUMAN; BP 1; eIF4E binding protein 1; eIF4E-binding protein 1; Eif4ebp1; Eukaryotic translation initiation factor 4E-binding protein 1; PHAS-I; PHASI; Phosphorylated heat- and acid-stable protein regulated by insulin 1; anti-4E-BP1 antibody

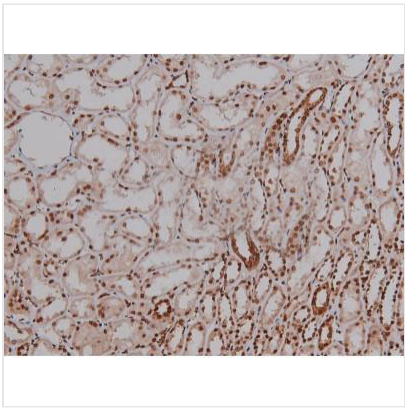
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Zebrafish (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-4E-BP1 (Thr36) Antibody detects endogenous levels of 4E-BP1 only when phosphorylated at Thr36.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-4E-BP1 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human 4E-BP1 around the phosphorylation site of Thr36.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylated on serine and threonine residues in response to insulin, EGF and PDGF. Phosphorylation at Thr-37, Thr-46, Ser-65 and Thr-70, corresponding to the hyperphosphorylated form, is regulated by mTORC1 and abolishes binding to EIF4E. Ubiquitinated: when eIF4E levels are low, hypophosphorylated form is ubiquitinated by the BCR (KLHL25) complex, leading to its degradation and serving as a homeostatic mechanism to maintain translation and prevent eIF4E inhibition when eIF4E levels are low. Not ubiquitinated when hyperphosphorylated (at Thr-37, Thr-46, Ser-65 and Thr-70) or associated with eIF4E.
Subunit Structure	Hypophosphorylated EIF4EBP1 competes with EIF4G1/EIF4G3 to interact with EIF4E; insulin stimulated MAP-kinase (MAPK1 and MAPK3) or mTORC1 phosphorylation of EIF4EBP1 causes dissociation of the complex allowing EIF4G1/EIF4G3 to bind and consequent initiation of translation. Interacts (via TOS motif) with RPTOR; promoting phosphorylation by mTORC1.
Similarity	The TOS motif mediates interaction with RPTOR, leading to promote phosphorylation by mTORC1 complex. Belongs to the eIF4E-binding protein family.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



Application Data

At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



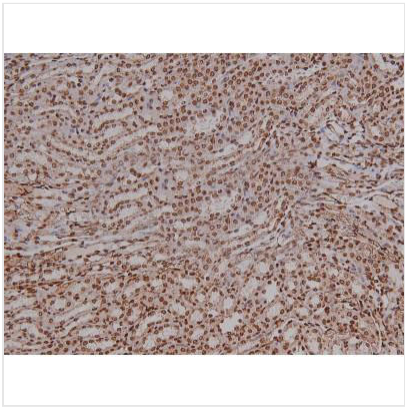
IHC (Immunohistochemistry)

At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



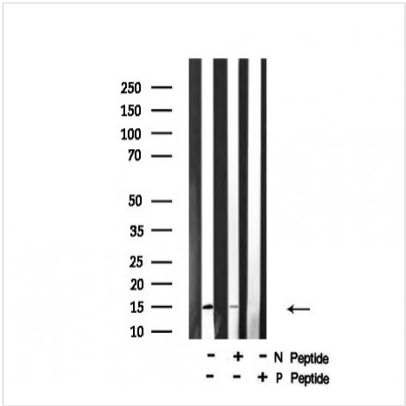
IHC (Immunohistochemisry)

At 1/200 staining Mouse kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)

Staining Rat kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of 4E-BP1 (Phospho-Thr36) using Mouse brain tissue lysates. -/+ means absence or presence of N peptide/-/+non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-4E-BP1 antibody	Repressor of translation initiation that regulates EIF4E activity by preventing its assembly into the eIF4F complex: hypophosphorylated form competes with EIF4G1/EIF4G3 and strongly binds to EIF4E, leading to repress translation. In contrast, hyperphosphorylated form dissociates from EIF4E, allowing interaction between EIF4G1/EIF4G3 and EIF4E, leading to initiation of translation. Mediates the regulation of protein translation by hormones, growth factors and other stimuli that signal through the MAP kinase and mTORC1 pathways.
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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

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/4e-bp1-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/329646>