ARG58238
anti-4E-BP1 phospho (Thr70) antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes 4E-BP1 phospho (Thr70)
Tested Reactivity	Hu, Ms, Rat
Tested Application	IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	4E-BP1
Species	Human
Immunogen	Phospho specific peptide corresponding to residues surrounding Thr70 of Human 4E-BP1.
Conjugation	Un-conjugated
Alternate Names	Phosphorylated heat- and acid-stable protein regulated by insulin 1; eIF4E-binding protein 1; PHAS-I; Eukaryotic translation initiation factor 4E-binding protein 1; 4EBP1; 4E-BP1; BP-1

Application Instructions

Application table

Application	Dilution
IHC-P	1:50 - 1:200
WB	1:500 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	293 + FBS
Observed Size	20 kDa

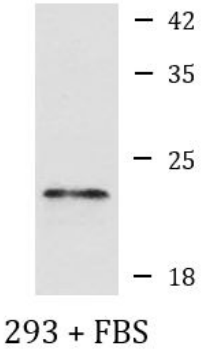
Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	EIF4EBP1
Gene Full Name	eukaryotic translation initiation factor 4E binding protein 1
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]
Function	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. [UniProt]
Calculated Mw	13 kDa
PTM	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. [UniProt]

Images



ARG58238 anti-4E-BP1 phospho (Thr70) antibody WB image

Western blot: 25 µg of 293 cells treated by 10% FBS after serum-starvation overnight. The blot was stained with ARG58238 anti-4E-BP1 phospho (Thr70) antibody.