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EIF4EBP1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12627c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q13541
Other Accession	Q62622, Q60876, Q0P5A7, NP_004086.1
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB11691
Calculated MW	12580
Antigen Region	31-61

Additional Information

Gene ID	1978
Other Names	Eukaryotic translation initiation factor 4E-binding protein 1, 4E-BP1, eIF4E-binding protein 1, Phosphorylated heat- and acid-stable protein regulated by insulin 1, PHAS-I, EIF4EBP1
Target/Specificity	This EIF4EBP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 31-61 amino acids from the Central region of human EIF4EBP1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EIF4EBP1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EIF4EBP1

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.
Cellular Location	Cytoplasm. Nucleus. Note=Localization to the nucleus is unaffected by phosphorylation status. {ECO:0000250|UniProtKB:Q60876}

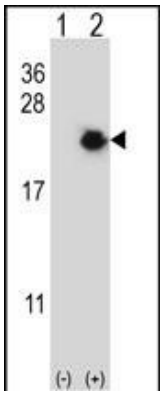
Background

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].

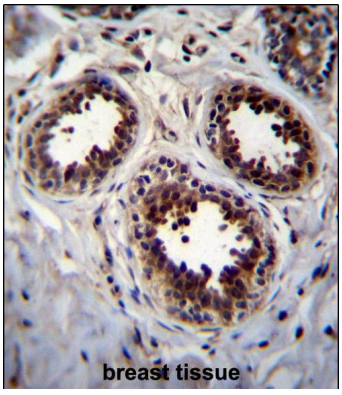
References

She, Q.B., et al. Cancer Cell 18(1):39-51(2010)
Aoyagi, M., et al. Proc. Natl. Acad. Sci. U.S.A. 107(6):2640-2645(2010)
Naukkarinen, J., et al. PLoS Genet. 6 (6), E1000976 (2010) :
Kumar, A., et al. PLoS ONE 5 (1), E8730 (2010) :
Villalonga, P., et al. J. Biol. Chem. 284(51):35287-35296(2009)

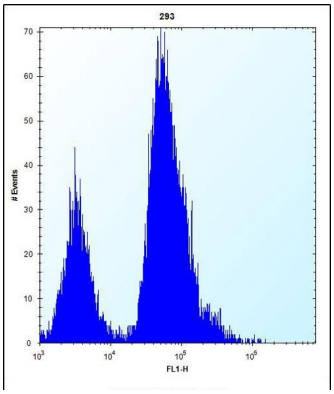
Images



Western blot analysis of EIF4EBP1 (arrow) using rabbit polyclonal EIF4EBP1 Antibody (Center) (Cat. #AP12627c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the EIF4EBP1 gene.



EIF4EBP1 Antibody (Center) (Cat. #AP12627c)immunohistochemistry analysis in formalin fixed and paraffin embedded human breast tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of EIF4EBP1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



EIF4EBP1 Antibody (Center) (Cat. #AP12627c) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Cysteine-rich protein 61 regulates adipocyte differentiation from mesenchymal stem cells through mammalian target of rapamycin complex 1 and canonical Wnt signaling.