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Phospho-EIF4EBP1(S111) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3473a

Product Information

Application	DB, E
Primary Accession	Q13541
Other Accession	Q62622, Q60876, NP_004086
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB13351
Calculated MW	12580

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 phosphopeptide corresponding to amino acid residues surrounding S111 of human EIF4EBP1.
Dilution	DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	Phospho-EIF4EBP1(S111) Antibody 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}

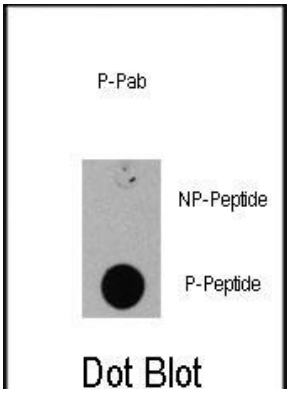
Background

EIF4EBP1 is a member of a family of translation repressor proteins. This 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 EIF4EBP1 with eIF4E inhibits complex assembly and represses translation. EIF4EBP1 is phosphorylated in response to various signals including UV irradiation and insulin signaling, resulting in its dissociation from eIF4E and activation of mRNA translation.

References

Fonseca,B.D., J. Biol. Chem. 282 (34), 24514-24524 (2007)
Armengol,G., Cancer Res. 67 (16), 7551-7555 (2007)

Images



Dot blot analysis of anti-EIF4EBP1-pS111 Phospho-specific Pab (RB13351) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Citations

- Association of maternal mRNA and phosphorylated EIF4EBP1 variants with the spindle in mouse oocytes: localized translational control supporting female meiosis in mammals.