

Phospho-EIF4EBP1(S111) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP3473a

Product Information

Application DB, E Primary Accession Q13541

Other Accession <u>Q62622</u>, <u>Q60876</u>, <u>NP 004086</u>

Reactivity
Predicted
Mouse, Rat
Host
Clonality
Polyclonal
Isotype
Rabbit IgG
Clone Names
RB13351
Calculated MW
Human
Rouse
Rabbit
Rabbit
Rabbit
RB13351

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}

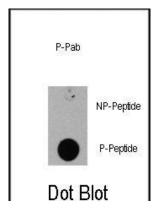
Background

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.