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# phospho-eIF4EBP1 (Ser65 + Thr70) Rabbit pAb

Catalog # AP96347

## Product Information

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| **Application** | WB, IHC-P, IHC-F, IF, E |
| **Primary Accession** | Q60876 |
| **Other Accession** | Q60876 |
| **Predicted** | Rat, Pig, Human, Mouse, Rabbit, Chicken, Dog, Horse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 12325 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated Synthesised phosphopeptide derived from mouse 4EBP1 around the phosphorylation site of Ser65/Thr70 |
| **Epitope Specificity** | RN(p-S)PVTK(p-T)PP |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Belongs to the eIF4E-binding protein family. |
| **SUBUNIT** | Nonphosphorylated 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 with RPTOR. |
| **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 is regulated by mTORC1. |
| **DISEASE** | Amyloidosis 5 (AMYL5) [MIM:105120]: A hereditary generalized amyloidosis due to gelsolin amyloid deposition. It is typically characterized by cranial neuropathy and lattice corneal dystrophy. Most patients have modest involvement of internal organs, but severe systemic disease can develop in some individuals causing peripheral polyneuropathy, amyloid cardiomyopathy, and nephrotic syndrome leading to renal failure. Note=The disease is caused by mutations affecting the gene represented in this entry. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | 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]. |

## Additional Information

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| **Gene ID** | 13685 |
| **Other Names** | 4E-BP1; 4EBP1; BP-1; PHAS-I; 4EBP1_HUMAN; EIF4EBP1; eIF4E-binding protein 1; Phosphorylated heat- and acid-stable protein regulated by insulin 1 (PHAS-I); 4EBP1_MOUSE; 4EBP1_RAT; eukaryotic translation initiation factor 4E binding protein 1; phosphorylated heat- and acid-stable protein regulated by insulin 1; eIF4EBP1 (phospho-S65/T70); p-eIF4EBP1; phospho-eIF4EBP1; eIF4EBP1 (phospho-Ser65/Thr70) |
| **Dilution** | WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **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 (By similarity). Mediates the regulation of protein translation by hormones, growth factors and other stimuli that signal through the MAP kinase and mTORC1 pathways (PubMed:7629182). |
| **Cellular Location** | Cytoplasm. Nucleus. Note=Localization to the nucleus is unaffected by phosphorylation status. |
| **Tissue Location** | Highest expression in fat cells. |

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