

# Anti-eIF4EBP1 Antibody [3G1]

## RT1002



|                            |   |
|----------------------------|---|
| <b>Product Type:</b>       | Mouse monoclonal IgG1, primary antibodies |
| <b>Species reactivity:</b> | Human, Mouse, Rat                         |
| <b>Applications:</b>       | WB, IP, IF, IHC-P                         |
| <b>Molecular Wt:</b>       | 21 kDa                                    |
| <b>Clone number:</b>       | 3G1                                       |

**Description:** The translation of proteins from eukaryotic mRNA is initiated by the multisubunit complex eIF-4F, which associates with the mRNA 5' cap structure. eIF-4E, a component of eIF-4F, is responsible for binding to the 5' cap structure and for the assembly of the eIF-4F complex. The regulatory protein 4E-BP1, also referred to as PHAS-I, inhibits eIF-4E function. Phosphorylation of 4E-BP1 by S6 kinase p70, MAP kinases or PKCs causes the disassociation of 4E-BP1 from eIF-4E, promoting translation. A protein that is functionally related to 4E-BP1, designated 4E-BP2, also associates with eIF-4E.

**Immunogen:** peptide

**Positive control:** 293T, human pancreas tissue.

**Subcellular location:** Cytoplasm cytosol nucleoplasm

**Database links:** SwissProt: Q13541 Human

### Recommended Dilutions:

|              |   |
|--------------|---|
| <b>WB</b>    | 1:100-1:1,000   |
| <b>IP</b>    | 1-2 µg per 100-500 µg of total protein(1 ml of cell lysate) |
| <b>IF</b>    | 1:50-500  |
| <b>IHC-P</b> | 1:50-500  |

**Storage Buffer:** 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**Storage Instruction:** Store at +4°C

**Purity:** Protein A affinity purified.

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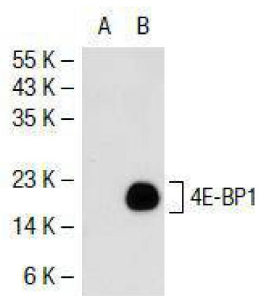
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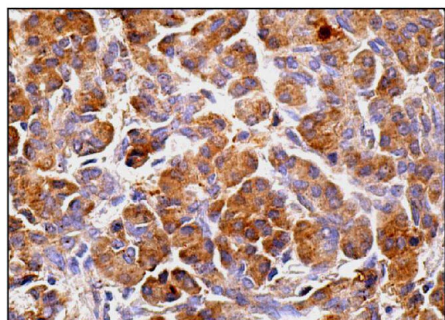
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## Images



**Fig1:** Western blot analysis of 4E-BP1 expression in non-transfected(A) and mouse 4E-BP1 transfected(B) 293T whole cell lysates.



**Fig2:** Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. von Manteuffel, S.R., et al.1996. 4E-BP1 phosphorylation is mediated by the FRAP-p70s6k pathway and is independent of mitogen-activated protein kinase. *Proc. Natl. Acad. Sci. USA* 93: 4076-4080.
2. Mendez, R., et al. 1996. Stimulation of protein synthesis, eukaryotic translation initiation factor 4E phosphorylation, and PHAS-I phosphorylation by Insulin requires Insulin receptor substrate 1 and phosphatidylinositol 3- kinase. *Mol. Cell. Biol.* 16: 2857-2864.
3. Whalen, S.G., et al.1996. Phosphorylation of eIF-4E on serine 209 by protein kinase C is inhibited by the translational repressors, 4E-binding proteins. *J. Biol. Chem.* 271: 11831-11837.

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