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# 4E-BP1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1083a

## Product Information

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| **Application** | WB, IHC, E |
| **Primary Accession** | Q13541 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Clone Names** | 11G12C11 |
| **Isotype** | IgG1 |
| **Calculated MW** | 12580 |
| **Description** | 4E-BP1(eukaryotic translation Initiation Factor 4E Binding Protein 1),also called ELF4EBP1/BP-1/PHAS-I ,which is located on chromosome 8p12, with 118-amino acid protein (about 13kDa). Binding of eIF4EBP1 to eIF4E is reversible and is dependent on the phosphorylation status of eIF4EBP1. Non phosphorylated eIF4EBP1 will bind strongly to eIF4E while(24kDa), the phosphorylated form will not. Akt, TOR, MAP kinase, S6 kinase, and Cdc2 are known kinases capable of inactivating eIF4EBP1 binding to eIF4E by phosphorylating either threonines 35, 45, 69 or serine 64. Although, not all phosphorylation events equally block the eIF4EBP1-eIF4E interaction. |
| **Immunogen** | Purified recombinant fragment of 4EBP1 expressed in E. Coli. |
| **Formulation** | Purified antibody in PBS containing 0.03% sodium azide. |

## Additional Information

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| **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 |
| **Dilution** | WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A |
| **Storage** | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | 4E-BP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## 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. 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} |

## References

1. Pause, A. et al. 1994.Nature. 371:762–767. 2. Fadden, P. et al. 1997. J. Biol. Chem. 272:10240–10247.

## Images

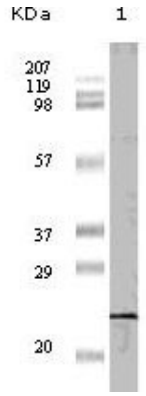



Figure 1: Western blot analysis using 4E-BP1 mouse mAb against truncated 4E-BP1 recombinant protein (1).

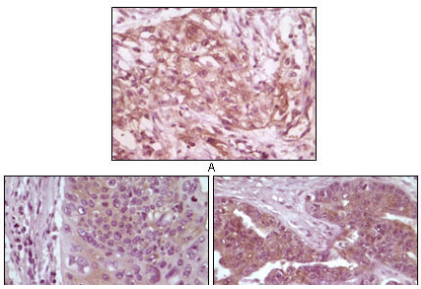


Figure 2: Immunohistochemical analysis of paraffin-embedded human pancreas carcinoma (A), esophagus carcinoma tissue (B) and ovary tumor tissue, showing cytoplasmic and membrane localization using 4E-BP1 mouse mAb with DAB staining.

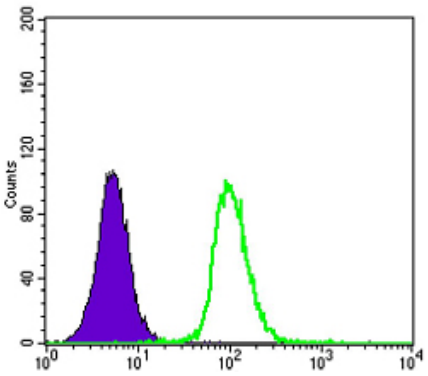
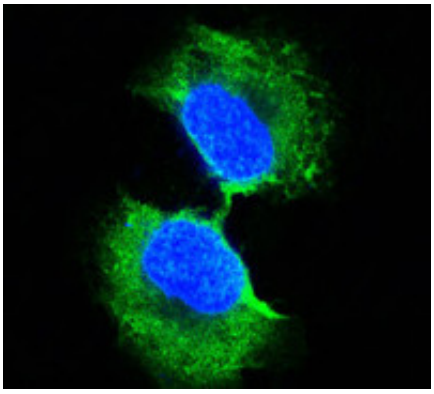



Figure 6: Flow cytometric analysis of K562 cells using GSTP1 mouse mAb (green) and negative control (purple).

Figure 3: Confocal immunofluorescence analysis of PC-3



cells using anti-GSTP1 mAb (green). Blue: DRAQ5 fluorescent DNA dye.

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