Anti-eIF4EBP1 Antibody [JJ09-25]

ET1701-83

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, IP
Molecular Wt:	Predicted band size: 13 kDa
Clone number:	JJ09-25

Description: 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 cap-dependent mRNA translation.

Immunogen: Synthetic peptide with Human eIF4EBP1 aa 1-49 / 118.

Positive control: K-562 cell lysate, HepG2 cell lysate, HEK-293 cell lysate, L6 cell lysate, NIH/3T3 cell lysate, Mouse skeletal muscle tissue lysate, Rat skeletal muscle tissue lysate, HepG2, human breast cancer tissue, human colon cancer tissue.

Subcellular location: Cytoplasm, cytosol.

Database links: SwissProt: Q13541 Human | Q60876 Mouse | Q62622 Rat

Recommended Dilutions:

WB	1:1,000-1:2,000
IF-Cell	1:50-1:200
IF-Tissue	1:50-1:200
IHC-P	1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

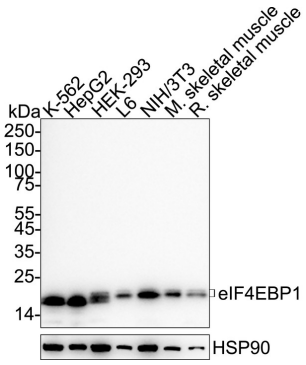

Fig1: Western blot analysis of eIF4EBP1 on different lysates with Rabbit anti-eIF4EBP1 antibody (ET1701-83) at 1/1,000 dilution.

Lane 1: K-562 cell lysate
Lane 2: HepG2 cell lysate
Lane 3: HEK-293 cell lysate
Lane 4: L6 cell lysate
Lane 5: NIH/3T3 cell lysate
Lane 6: Mouse skeletal muscle tissue lysate
Lane 7: Rat skeletal muscle tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 13 kDa
Observed band size: 17/18 kDa

Exposure time: 26 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1701-83) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

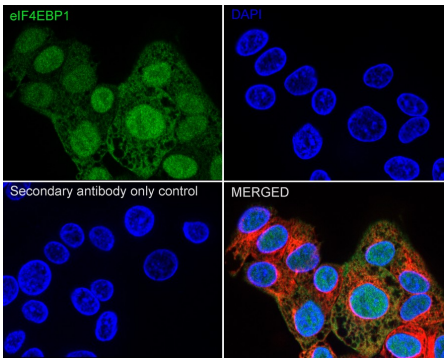

Fig2: Immunocytochemistry analysis of HepG2 cells labeling eIF4EBP1 with Rabbit anti-eIF4EBP1 antibody (ET1701-83) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-eIF4EBP1 antibody (ET1701-83) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

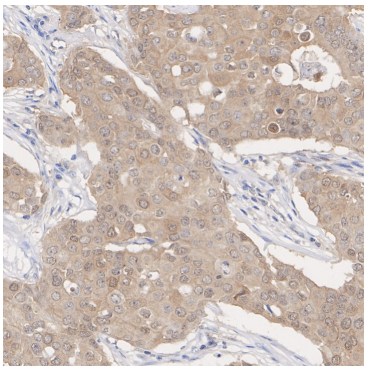

Fig3: Immunohistochemical analysis of paraffin-embedded human breast cancer tissue with Rabbit anti-eIF4EBP1 antibody (ET1701-83) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1701-83) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

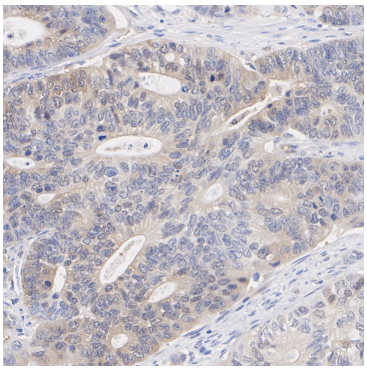

Fig4: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Rabbit anti-eIF4EBP1 antibody (ET1701-83) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1701-83) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Voeltzke K et al. EIF4EBP1 is transcriptionally upregulated by MYCN and associates with poor prognosis in neuroblastoma. Cell Death Discov. 2022 Apr
2. Nelson ED et al. High EIF4EBP1 expression reflects mTOR pathway activity and cancer cell proliferation and is a biomarker for poor breast cancer prognosis. Am J Cancer Res. 2024 Jan