Anti-eIF2A Antibody [JE58-18]

ET7111-34

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 65 kDa
Clone number:	JE58-18

Description: This gene encodes a eukaryotic translation initiation factor that catalyzes the formation of puromycin-sensitive 80 S preinitiation complexes and the poly(U)-directed synthesis of polyphenylalanine at low concentrations of Mg2+. This gene should not be confused with eIF2-alpha (EIF2S1, Gene ID: 1965), the alpha subunit of the eIF2 translation initiation complex. Although both of these proteins function in binding initiator tRNA to the 40 S ribosomal subunit, the encoded protein does so in a codon-dependent manner, whereas eIF2 complex requires GTP. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms.

Immunogen: Recombinant protein within human EIF2A aa 435-585.

Positive control: A431 cell lysate, PC-12 cell lysate, Rat pancreas tissue lysate, NIH/3T3 cell lysate, Mouse pancreas tissue lysate, human lung carcinoma tissue.

Subcellular location: Cytoplasm, extracellular region or secreted.

Database links: SwissProt: Q9BY44 Human | Q8BJW6 Mouse | P68101 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:50-1:200

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

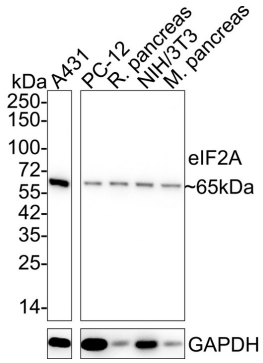

Fig1: Western blot analysis of eIF2A on different lysates with Rabbit anti-eIF2A antibody (ET7111-34) at 1/1,000 dilution.

Lane 1: A431 cell lysate (20 µg/Lane)
Lane 2: PC-12 cell lysate (20 µg/Lane)
Lane 3: Rat pancreas tissue lysate (40 µg/Lane)
Lane 4: NIH/3T3 cell lysate (20 µg/Lane)
Lane 5: Mouse pancreas tissue lysate (40 µg/Lane)

Predicted band size: 65 kDa
Observed band size: 65 kDa

Exposure time: 24 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 (ET7111-34) 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.

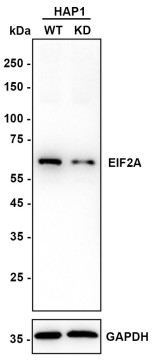

Fig2: Western blot analysis of eIF2A on different lysates with Rabbit anti-eIF2A antibody (ET7111-34) at 1/1,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-eIF2A KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 65 kDa
Observed band size: 65 kDa

Exposure time: 20 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 (ET7111-34) at 1/1,000 dilution was used in K1803 at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

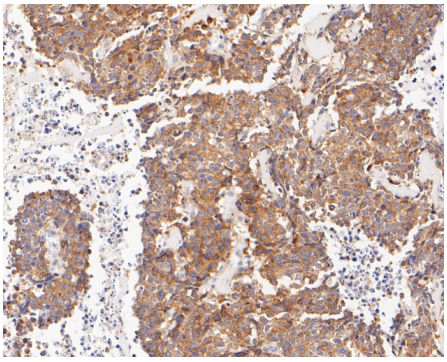

Fig3: Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue using anti-eIF2A antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7111-34, 1/200) for 30 minutes 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.

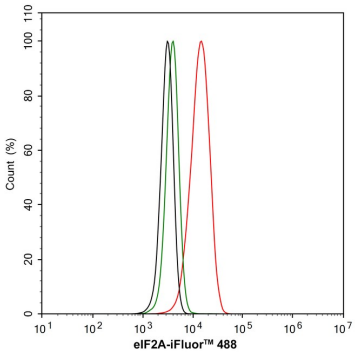

Fig4: Flow cytometric analysis of NIH/3T3 cells labeling eIF2A.

Cells were fixed and permeabilized. Then stained with the primary antibody (ET7111-34, 1μg/mL) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

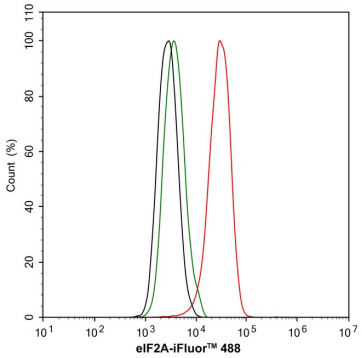

Fig5: Flow cytometric analysis of PC-12 cells labeling eIF2A.

Cells were fixed and permeabilized. Then stained with the primary antibody (ET7111-34, 1μg/mL) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

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

Background References

1. Komar AA.et. al. A Retrospective on eIF2A-and Not the Alpha Subunit of eIF2. Int J Mol Sci. 2020 Mar
2. Chen L.et. al. EIF2A promotes cell survival during paclitaxel treatment in vitro and in vivo. J Cell Mol Med. 2019 Sep