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Anti-EIF3e Antibody Picoband™ (monoclonal, 10F5H6)

Catalog # ABO16248

Product Information

Application	WB, FC
Primary Accession	P60228
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-EIF3e Antibody Picoband™ (monoclonal, 10F5H6) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	3646
Other Names	Eukaryotic translation initiation factor 3 subunit E {ECO:0000255|HAMAP-Rule:MF_03004}, eIF3e {ECO:0000255|HAMAP-Rule:MF_03004}, Eukaryotic translation initiation factor 3 subunit 6 {ECO:0000255|HAMAP-Rule:MF_03004}, Viral integration site protein INT-6 homolog, eIF-3 p48 {ECO:0000255|HAMAP-Rule:MF_03004}, EIF3E {ECO:0000255|HAMAP-Rule:MF_03004}
Calculated MW	52221
Application Details	Western blot, 0.25-0.5 □g/ml, Human, Mouse, Rat Flow Cytometry, 1-3 □g/1x10^6 cells, Human
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 10F5H6
Immunogen	E.coli-derived human EIF3e recombinant protein (Position: A160-Q241). Human EIF3e shares 100% amino acid (aa) sequence identity with both mouse and rat EIF3e.
Purification	Immunogen affinity purified.
Storage	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Protein Information

Name	EIF3E {ECO:0000255|HAMAP-Rule:MF_03004}
Function	Component of the eukaryotic translation initiation factor 3 (eIF-3) complex, which is required for several steps in the initiation of protein synthesis (PubMed:17581632, PubMed:25849773, PubMed:27462815). The eIF-3 complex associates with the 40S ribosome and facilitates the recruitment of eIF-1, eIF-1A, eIF-2:GTP:methionyl- tRNAi and eIF-5 to form the 43S pre-initiation complex (43S PIC). The eIF-3 complex stimulates mRNA recruitment to the 43S PIC and scanning of the mRNA for AUG recognition. The eIF-3 complex is also required for disassembly and recycling of post-termination ribosomal complexes and subsequently prevents premature joining of the 40S and 60S ribosomal subunits prior to initiation (PubMed:17581632). The eIF-3 complex specifically targets and initiates translation of a subset of mRNAs involved in cell proliferation, including cell cycling, differentiation and apoptosis, and uses different modes of RNA stem-loop binding to exert either translational activation or repression (PubMed:25849773). Required for nonsense-mediated mRNA decay (NMD); may act in conjunction with UPF2 to divert mRNAs from translation to the NMD pathway (PubMed:17468741). May interact with MCM7 and EPAS1 and regulate the proteasome-mediated degradation of these proteins (PubMed:17310990, PubMed:17324924).
Cellular Location	Cytoplasm. Nucleus, PML body.
Tissue Location	Ubiquitously expressed. Expressed at highest levels in appendix, lymph, pancreas, skeletal muscle, spleen and thymus

Background

Eukaryotic translation initiation factor 3 subunit E is a protein that in humans is encoded by the EIF3E gene. The human homolog of EIF3E is located on chromosome region 8q22-q23. It is composed of 13 exons that span 45 kb of genomic DNA. EIF3E is the component of the eukaryotic translation initiation factor 3 (eIF-3) complex, which is required for several steps in the initiation of protein synthesis ts localization/assembly. The eIF-3 complex associates with the 40S ribosome and facilitates the recruitment of eIF-1, eIF-1A, eIF-2:GTP:methionyl-tRNAi and eIF-5 to form the 43S pre-initiation complex (43S PIC). And the eIF-3 complex stimulates mRNA recruitment to the 43S PIC and scanning of the mRNA for AUG recognition. The eIF-3 complex is also required for disassembly and recycling of post-termination ribosomal complexes and subsequently prevents premature joining of the 40S and 60S ribosomal subunits prior to initiation.

Images

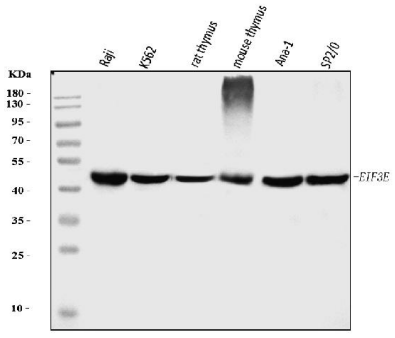


Figure 1. Western blot analysis of EIF3E using anti-EIF3E antibody (M00481-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Raji whole cell lysates,
Lane 2: human K562 whole cell lysates,
Lane 3: rat thymus tissue lysates,
Lane 4: mouse thymus tissue lysates,
Lane 5: mouse ANA-1 whole cell lysates,
Lane 6: mouse SP2/0 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-EIF3E antigen affinity purified monoclonal antibody (Catalog # M00481-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for EIF3E at approximately 52 kDa. The expected band size for EIF3E is at 52 kDa.

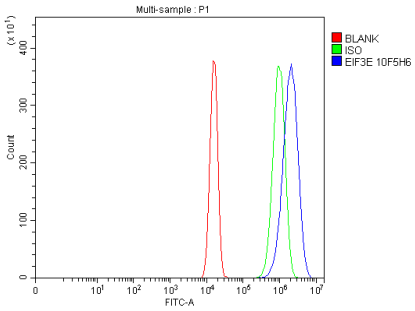


Figure 2. Flow Cytometry analysis of U20S cells using anti-EIF3E antibody (M00481-1).
Overlay histogram showing U20S cells stained with M00481-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EIF3E Antibody (M00481-1, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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