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Anti-EIF4A1 Antibody Picoband™ (monoclonal, 3F11)

Catalog # ABO15085

Product Information

Application	WB, IHC, IF, ICC, FC
Primary Accession	P60842
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-EIF4A1 Antibody Picoband™ (monoclonal, 3F11) . Tested in Flow Cytometry, IF, IHC, ICC, 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	1973
Other Names	Eukaryotic initiation factor 4A-I, eIF-4A-I, eIF4A-I, 3.6.4.13, ATP-dependent RNA helicase eIF4A-1, EIF4A1, DDX2A, EIF4A
Calculated MW	46154
Application Details	Western blot, 0.25-0.5 □g/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 □g/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 □g/ml, Human Flow Cytometry, 1-3 □g/1x10^6 cells, Human, Mouse, Rat
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 3F11
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human EIF4A1, identical to the related mouse and rat sequences.
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	EIF4A1
Synonyms	DDX2A, EIF4A
Function	ATP-dependent RNA helicase which is a subunit of the eIF4F complex involved in cap recognition and is required for mRNA binding to ribosome (PubMed:20156963). In the current model of translation initiation, eIF4A unwinds RNA secondary structures in the 5'-UTR of mRNAs which is necessary to allow efficient binding of the small ribosomal subunit, and subsequent scanning for the initiator codon. As a result, promotes cell proliferation and growth (PubMed:20156963).
Cellular Location	Cytoplasm, perinuclear region. Cell membrane. Cytoplasm, Stress granule. Note=Colocalizes with PKP1 in stress granules following arsenate or hydrogen peroxide treatment

Background

Eukaryotic initiation factor 4A-I is a protein that in humans is encoded by the EIF4A1 gene. It is mapped to 17p13.1. EIF4A1 has been shown to interact with EIF4E and eukaryotic translation initiation factor 4 gamma.

Images

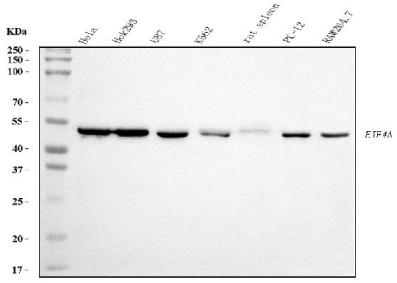
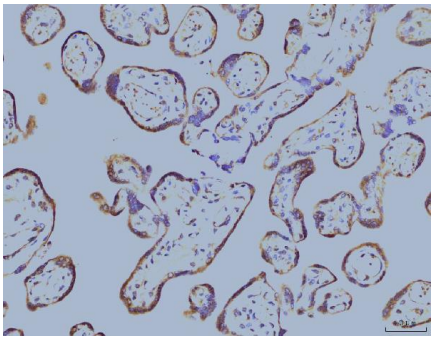


Figure 1. Western blot analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human Hek293 whole cell lysates,
Lane 3: human U87 whole cell lysates,
Lane 4: human K562 whole cell lysates,
Lane 5: rat spleen tissue lysates,
Lane 6: rat PC-12 whole cell lysates,
Lane 7: mouse RAW264.7 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-EIF4A1 antigen affinity purified monoclonal antibody (Catalog # M03922-2) 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 EIF4A1 at approximately 47 kDa. The expected band size for EIF4A1 is at 47kDa.

Figure 2. IHC analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-2).
EIF4A1 was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval



was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EIF4A1 Antibody (M03922-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

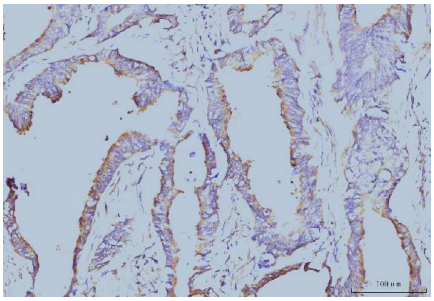


Figure 3. IHC analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-2).
EIF4A1 was detected in a paraffin-embedded section of human colonic adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EIF4A1 Antibody (M03922-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

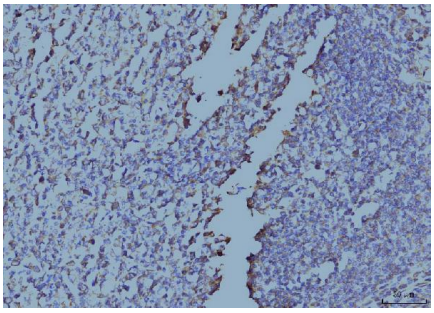


Figure 4. IHC analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-2).
EIF4A1 was detected in a paraffin-embedded section of human tonsli tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EIF4A1 Antibody (M03922-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

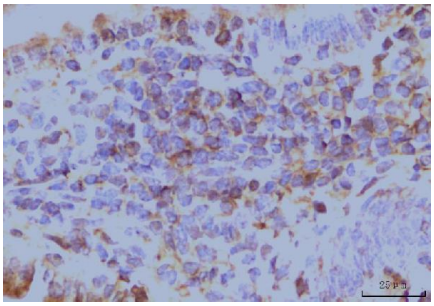
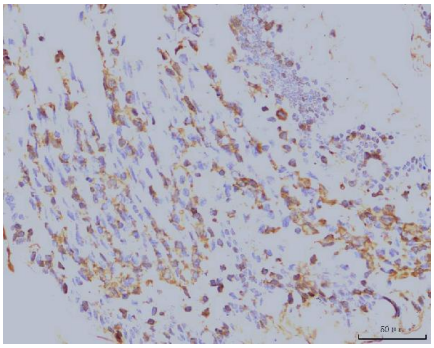


Figure 5. IHC analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-2).
EIF4A1 was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EIF4A1 Antibody (M03922-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Figure 6. IHC analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-2).
EIF4A1 was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat



serum. The tissue section was then incubated with 2 µg/ml mouse anti-EIF4A1 Antibody (M03922-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

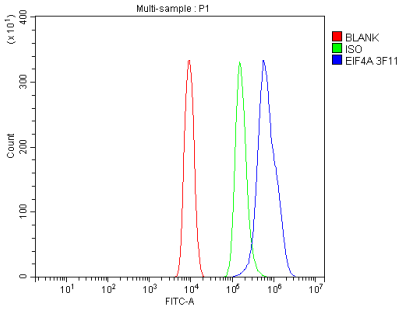


Figure 7. Flow Cytometry analysis of ANA-1 cells using anti-EIF4A1 antibody (M03922-2).
Overlay histogram showing ANA-1 cells stained with M03922-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EIF4A1 Antibody (M03922-2, 1 µg/1x10^6 cells) for 30 min 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.

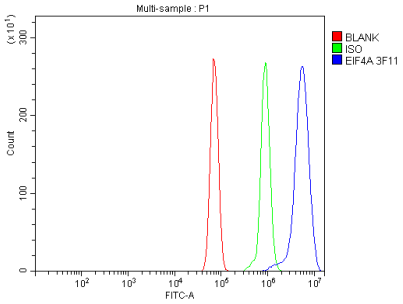


Figure 8. Flow Cytometry analysis of RH35 cells using anti-EIF4A1 antibody (M03922-2).
Overlay histogram showing RH35 cells stained with M03922-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EIF4A1 Antibody (M03922-2, 1 µg/1x10^6 cells) for 30 min 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.

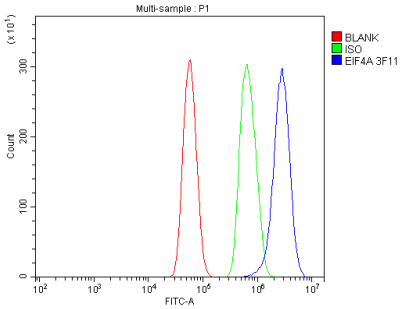
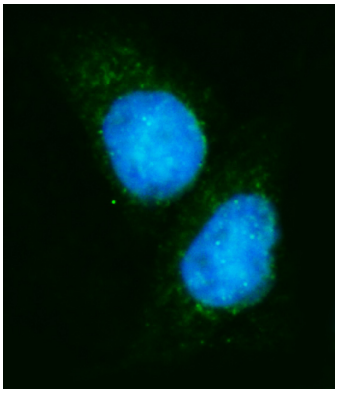


Figure 9. Flow Cytometry analysis of U87 cells using anti-EIF4A1 antibody (M03922-2).
Overlay histogram showing U87 cells stained with M03922-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EIF4A1 Antibody (M03922-2, 1 µg/1x10^6 cells) for 30 min at 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.

Figure 10. IF analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-2).
EIF4A1 was detected in an immunocytochemical section of HEP3B cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-EIF4A1 Antibody (M03922-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as



secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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