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Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8)

Catalog # ABO14981

Specification

Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8) - Product Information

Application	**WB, IHC, IF, ICC, FC**
Primary Accession	P60842
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8) - 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
46 kDa KDa

Application Details
Western blot, 0.1-0.25 µg/ml, Human, Mouse, Rat
 Immunohistochemistry (Paraffin-embedded Section), 2-5 µg/ml, Human
 Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human, Mouse, Rat

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.

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	**Store 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 freeze-thaw cycles.

Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8) - 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

Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8) - Images

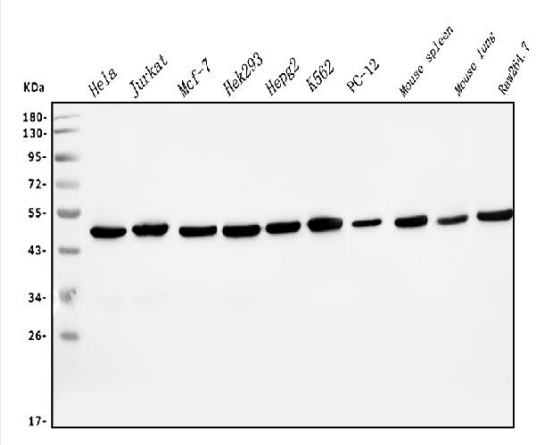

Figure 1. Western blot analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving

gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human Jurkat whole cell lysates,
Lane 3: human MCF-7 whole cell lysates,
Lane 4: human HEK293 whole cell lysates,
Lane 5: human HEPG2 whole cell lysates,
Lane 6: human K562 whole cell lysates,
Lane 7: rat PC-12 whole cell lysates,
Lane 8: mouse spleen tissue lysates,
Lane 9: mouse lung tissue lysates,
Lane 10: mouse RAW264.7 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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 # M03922-1) at 0.25 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 46KD. The expected band size for EIF4A1 is at 46KD.

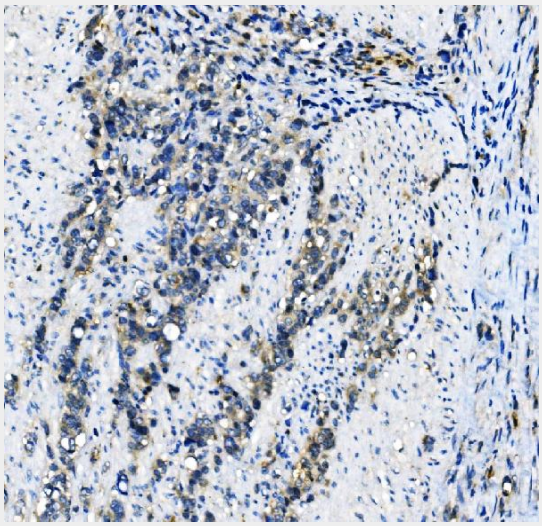

Figure 2. IHC analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-1).
EIF4A1 was detected in paraffin-embedded section of human gastric cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EIF4A1 Antibody (M03922-1) 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.

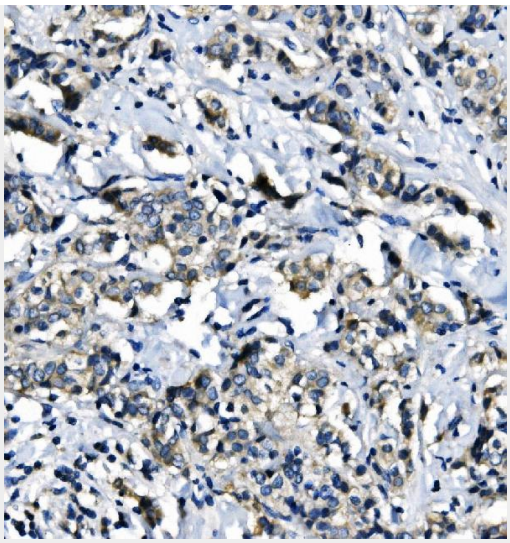

Figure 3. IHC analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-1).
EIF4A1 was detected in paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EIF4A1 Antibody (M03922-1) 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.

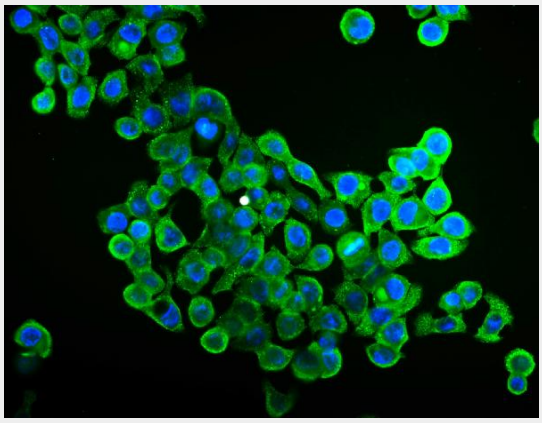

Figure 4. IF analysis of EIF4A1 using anti-EIF4A1 antibody (M03922-1).
EIF4A1 was detected in immunocytochemical section of CACO-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-EIF4A1 Antibody (M03922-1) 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.

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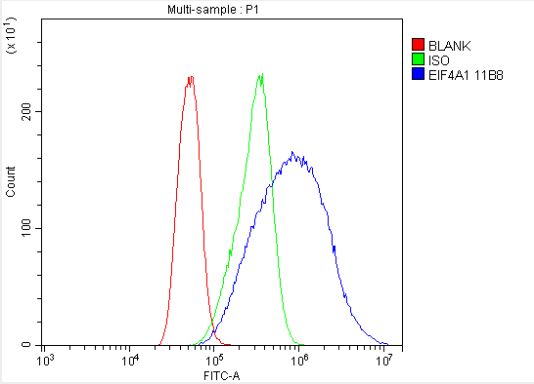

Figure 5. Flow Cytometry analysis of CACO-2 cells using anti-EIF4A1 antibody (M03922-1). Overlay histogram showing CACO-2 cells stained with M03922-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EIF4A1 Antibody (M03922-1, 1 µg/1x10^6 cells) for 30 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.

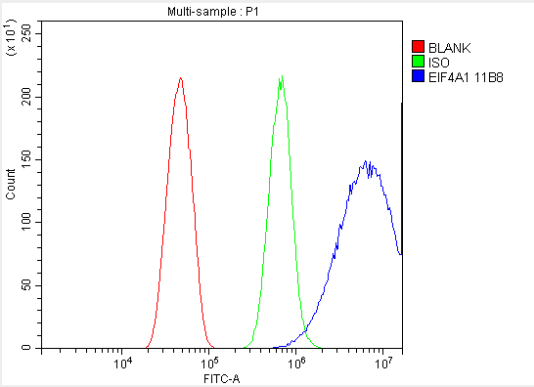

Figure 6. Flow Cytometry analysis of HEPA1-6 cells using anti-EIF4A1 antibody (M03922-1). Overlay histogram showing HEPA1-6 cells stained with M03922-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EIF4A1 Antibody (M03922-1, 1 µg/1x10^6 cells) for 30 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.

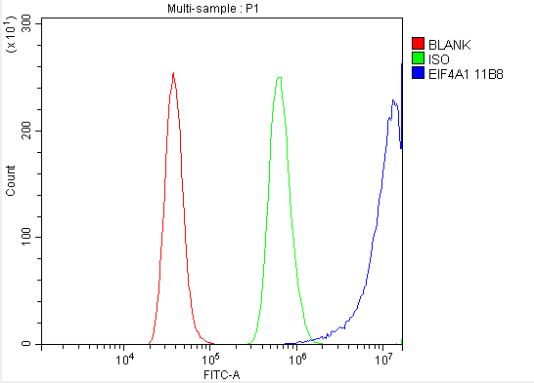

Figure 7. Flow Cytometry analysis of RH35 cells using anti-EIF4A1 antibody (M03922-1). Overlay histogram showing RH35 cells stained with M03922-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EIF4A1 Antibody (M03922-1, 1

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.

Anti-EIF4A1 Antibody Picoband™ (monoclonal, 11B8) - 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.