BOSTER
antibody and ELISA experts

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Anti-eIF4A2 Antibody Picoband®

Catalog Number: PB9758

About EIF4A2

Eukaryotic initiation factor 4A-II is a protein that in humans is encoded by the EIF4A2 gene. It is mapped to 18p11.2. Eukaryotic initiation factor 4A plays an important role in the binding of mRNA to the 43S preinitiation complex when protein synthesis begins. Two highly homologous forms of functional EIF4A genes, Eif4a1 and Eif4a2, have been isolated in mice; yeast cells also possess 2 EIF4A genes, TIF1 and TIF2. The murine Eif4a and yeast TIF genes appear to belong to a DEAD-box gene family, whose members exhibit extensive amino acid similarity and contain the asp-glu-ala-asp (DEAD) sequence. DEAD-box genes have been identified in species ranging from E-coli to humans. Their function appears to be related to transcriptional/translational regulation.

Overview

Product Name	Anti-eIF4A2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-eIF4A2 Antibody Picoband® catalog # PB9758. Tested in Flow Cytometry, IP, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IP, IF, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	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.
Host	Rabbit
Uniprot ID	Q14240

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human eIF4A2, identical to the related mouse and rat sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Immunoprecipitation, 0.5-2 ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human

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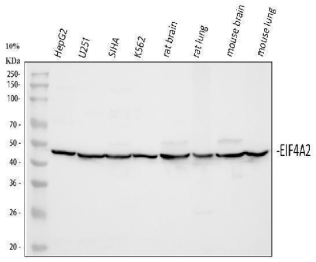
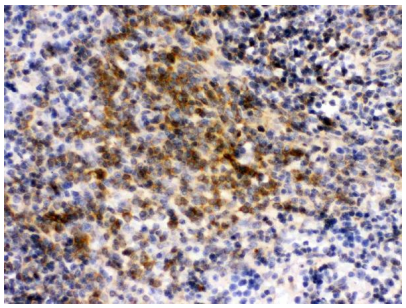
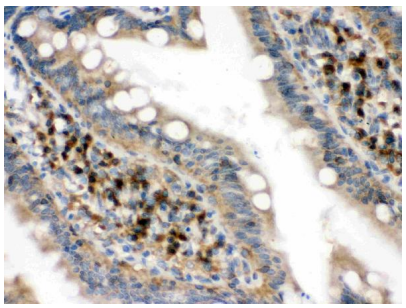
Anti-eIF4A2 Antibody Picoband® (PB9758) Images



Western blot analysis of eIF4A2 using anti-eIF4A2 antibody (PB9758). 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 HepG2 whole cell lysates, Lane 2: human U251 whole cell lysates, Lane 3: human SiHa whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat lung tissue lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse lung tissue 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 rabbit anti-eIF4A2 antigen affinity purified polyclonal antibody (Catalog # PB9758) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for eIF4A2 at approximately 46 kDa. The expected band size for eIF4A2 is at 46 kDa.



IHC analysis of eIF4A2 using anti-eIF4A2 antibody (PB9758). eIF4A2 was detected in a paraffin-embedded section of mouse spleen 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 1 ug/ml rabbit anti-eIF4A2 Antibody (PB9758) overnight at 4°C. Biotinylated goat anti-rabbit 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 # SA1022) with DAB as the chromogen.



IHC analysis of eIF4A2 using anti-eIF4A2 antibody (PB9758). eIF4A2 was detected in a paraffin-embedded section of rat intestine 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 1 ug/ml rabbit anti-eIF4A2 Antibody (PB9758) overnight at 4°C. Biotinylated goat anti-rabbit 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 # SA1022) with DAB as the chromogen.

IHC analysis of eIF4A2 using anti-eIF4A2 antibody (PB9758). eIF4A2 was detected in a paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope

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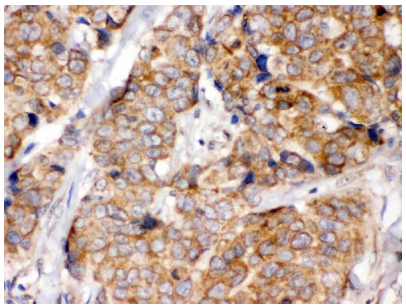
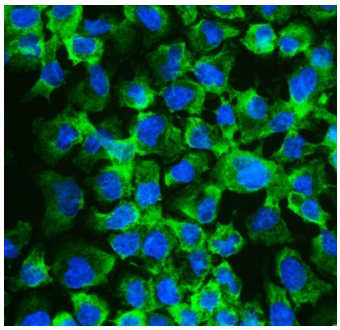
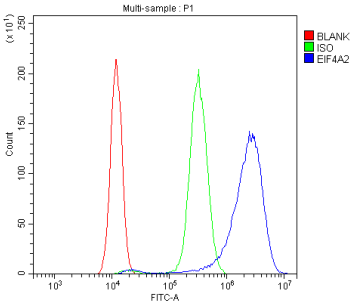


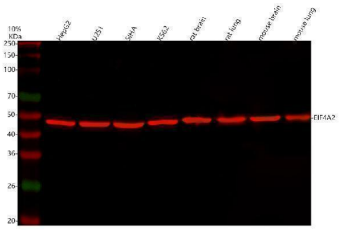
retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-eIF4A2 Antibody (PB9758) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of eIF4A2 using anti-eIF4A2 antibody (PB9758). eIF4A2 was detected in immunocytochemical section of A431 cell. 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 2ug/mL rabbit anti-eIF4A2 Antibody (PB9758) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) 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.



Flow Cytometry analysis of SiHa cells using anti-eIF4A2 antibody (PB9758). Overlay histogram showing SiHa cells stained with PB9758 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-eIF4A2 Antibody (PB9758,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of eIF4A2 using anti-eIF4A2 antibody (PB9758). 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 HepG2 whole cell lysates, Lane 2: human U251 whole cell lysates, Lane 3: human SiHa whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat lung tissue lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse lung tissue 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 rabbit anti-eIF4A2 antigen affinity purified polyclonal antibody (PB9758) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-DyLight 647 Conjugated secondary antibody at a dilution of 1:2000 for 1.5 hour at RT. A specific band was detected for eIF4A2 at

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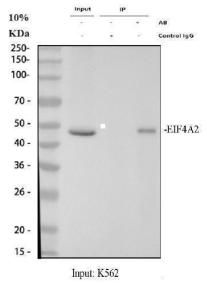
approximately 46 kDa. The expected band size for eIF4A2 is at 46 kDa.



Immunoprecipitating (IP) eIF4A2 in K562 whole cell lysate. Western blot analysis of eIF4A2 using anti-eIF4A2 antibody (PB9758); Lane 1: K562 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-eIF4A2 antibody in K562 whole cell lysate; Lane 3: anti-eIF4A2 antibody (2ug) + K562 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-eIF4A2 antigen affinity purified polyclonal antibody (PB9758) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BM2007). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for eIF4A2 at approximately 46 kDa. The expected band size for eIF4A2 is at 46 kDa.

Anti-eIF4A2 Antibody

For Research Use Only. Not for use in diagnostic procedures.