BOSTER BIOLOGICAL TECHNOLOGY
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Anti-EIF2A Antibody Picoband®

Catalog Number: A02418-1

About EIF2A

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.

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Overview

Product Name	Anti-EIF2A Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-EIF2A Antibody Picoband® catalog # A02418-1. Tested in WB, IHC, Flow Cytometry, ELISA applications. This antibody reacts with Human, 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	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	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.
Host	Rabbit
Uniprot ID	Q9BY44

Technical Details

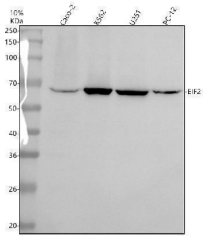
Immunogen	E.coli-derived human EIF2A recombinant protein (Position: H24-I585). Human EIF2A shares 92.5% amino acid (aa) sequence identity with mouse EIF2A.

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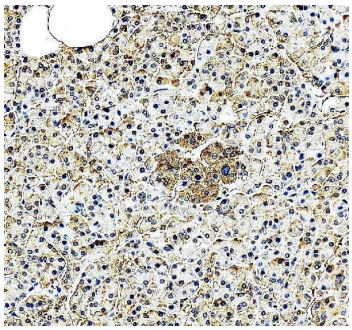
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human ELISA, 0.1-0.5 ug/ml Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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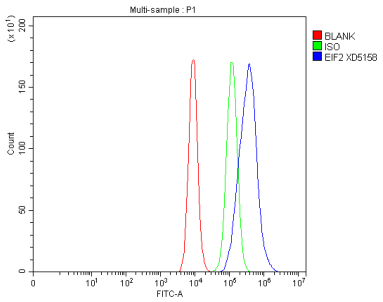
Anti-EIF2A Antibody Picoband® (A02418-1) Images



Western blot analysis of EIF2A using anti-EIF2A antibody (A02418-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Caco-2 whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: rat PC-12 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-EIF2A antigen affinity purified polyclonal antibody (A02418-1) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for EIF2A at approximately 65 kDa. The expected band size for EIF2A is at 65 kDa.



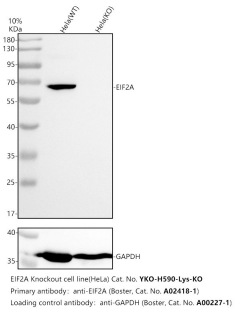
IHC analysis of EIF2A using anti-EIF2A antibody (A02418-1). EIF2A was detected in a paraffin-embedded section of human pancreas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-EIF2A Antibody (A02418-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Flow Cytometry analysis of Caco-2 cells using anti-EIF2A antibody (A02418-1). Overlay histogram showing Caco-2 cells stained with A02418-1 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-EIF2A Antibody (A02418-1, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/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 EIF2A using anti-EIF2A antibody (A02418-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2

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hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela-WT whole cell lysates, Lane 2: human Hela-EIF2A KO 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 rabbit anti-EIF2A antigen affinity purified polyclonal antibody (A02418-1) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for EIF2A at approximately 65 kDa. The expected band size for EIF2A is at 65 kDa.

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