

Anti-IMPA1 Antibody Picoband®

Catalog Number: A05882-2

About IMPA1

This gene encodes an enzyme that dephosphorylates myo-inositol monophosphate to generate free myo-inositol, a precursor of phosphatidylinositol, and is therefore an important modulator of intracellular signal transduction via the production of the second messengers myoinositol 1,4,5-trisphosphate and diacylglycerol. This enzyme can also use myo-inositol-1,3-diphosphate, myo-inositol-1,4-diphosphate, scyllo-inositol-phosphate, glucose-1-phosphate, glucose-6-phosphate, fructose-1-phosphate, beta-glycerophosphate, and 2'-AMP as substrates. This enzyme shows magnesium-dependent phosphatase activity and is inhibited by therapeutic concentrations of lithium. Inhibition of inositol monophosphate hydrolysis and subsequent depletion of inositol for phosphatidylinositol synthesis may explain the anti-manic and anti-depressive effects of lithium administered to treat bipolar disorder. Alternative splicing results in multiple transcript variants encoding distinct isoforms. A pseudogene of this gene is also present on chromosome 8q21.13.

Overview

Product Name	Anti-IMPA1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-IMPA1 Antibody Picoband® catalog # A05882-2. Tested in WB, IP, Flow Cytometry, ELISA 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	ELISA, Flow Cytometry, IP, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
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	P29218

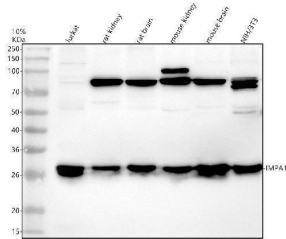
Technical Details

Immunogen	E.coli-derived human IMPA1 recombinant protein (Position: M1-D277). Human IMPA1 shares 86.6% and 85.1% amino acid (aa) sequence identity with mouse and rat IMPA1, respectively.
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.

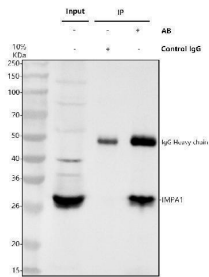
Suggested Dilutions

Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat
Immunoprecipitation, 0.5-2 ug/ml, Human
Flow Cytometry (Fixed), 1-3 ug/ 1×10^6 cells, Human
ELISA, 0.1-0.5 ug/ml

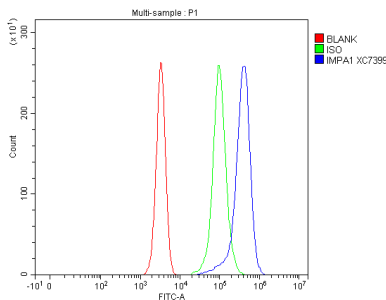
Anti-IMPA1 Antibody Picoband® (A05882-2) Images



Western blot analysis of IMPA1 using anti-IMPA1 antibody (A05882-2). 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 Jurkat whole cell lysates, Lane 2: rat kidney tissue lysates, Lane 3: rat brain tissue lysates, Lane 4: mouse kidney tissue lysates, Lane 5: mouse brain tissue lysates, Lane 6: mouse NIH/3T3 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-IMPA1 antigen affinity purified polyclonal antibody (A05882-2) 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 IMPA1 at approximately 30 kDa. The expected band size for IMPA1 is at 30 kDa.



Immunoprecipitating IMPA1 in Jurkat whole cell lysate. Western blot analysis of IMPA1 using anti-IMPA1 antibody (A05882-2). Lane 1: Jurkat whole cell lysates (30ug), Lane 2: Rabbit control IgG instead of anti-IMPA1 antibody in Jurkat whole cell lysate, Lane 3: anti-IMPA1 antibody (2ug) + Jurkat whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-IMPA1 antigen affinity purified polyclonal antibody (A05882-2) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for IMPA1 at approximately 30 kDa. The expected band size for IMPA1 is at 30 kDa.



Flow Cytometry analysis of Jurkat cells using anti-IMPA1 antibody (A05882-2). Overlay histogram showing Jurkat cells stained with A05882-2 (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-IMPA1 Antibody (A05882-2, 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.

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Anti-IMPA1 Antibody

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