

Anti-ATP1A3 Antibody Picoband®

Catalog Number: A02278-1

About ATP1A3

Sodium/potassium-transporting ATPase subunit alpha-3 is an enzyme that in humans is encoded by the ATP1A3 gene. The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na⁺/K⁺ -ATPases. Na⁺/K⁺ -ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane. These gradients are essential for osmoregulation, for sodium-coupled transport of a variety of organic and inorganic molecules, and for electrical excitability of nerve and muscle. This enzyme is composed of two subunits, a large catalytic subunit (alpha) and a smaller glycoprotein subunit (beta). The catalytic subunit of Na⁺/K⁺ -ATPase is encoded by multiple genes. This gene encodes an alpha 3 subunit. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

Overview

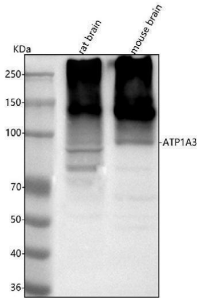
Product Name	Anti-ATP1A3 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ATP1A3 Antibody Picoband® catalog # A02278-1. Tested in WB, IHC, ELISA applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees 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, IHC, 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	P13637

Technical Details

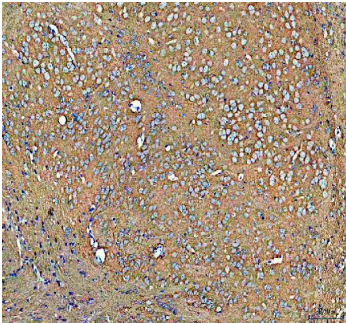
Immunogen	E.coli-derived human ATP1A3 recombinant protein (Position: D24-D583). Human ATP1A3 shares 99.8% amino acid (aa) sequence identity with both mouse and rat ATP1A3.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5 ug/ml, Mouse, Rat ELISA, 0.1-0.5 ug/ml, -

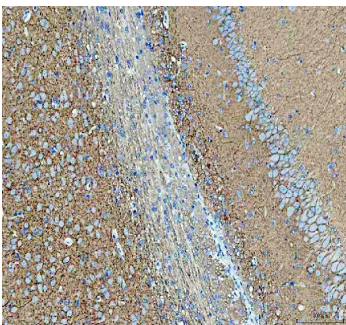
Anti-ATP1A3 Antibody Picoband® (A02278-1) Images



Western blot analysis of ATP1A3 using anti-ATP1A3 antibody (A02278-1). 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 30 ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain 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-ATP1A3 antigen affinity purified polyclonal antibody (Catalog # A02278-1) 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 Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ATP1A3 at approximately 90 kDa. The expected band size for ATP1A3 is at 112 kDa.

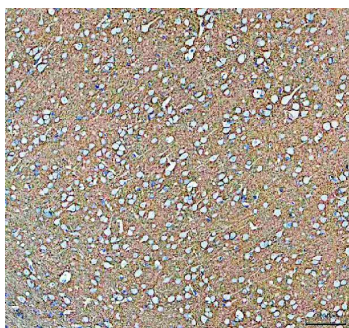


IHC analysis of ATP1A3 using anti-ATP1A3 antibody (A02278-1). ATP1A3 was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ATP1A3 Antibody (A02278-1) 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.



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Anti-ATP1A3 Antibody

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