

Anti-SERCA2 ATPase/ATP2A2 Antibody

Catalog Number: RP1054

About ATP2A1

SERCA2, also called ATP2A2 or ATP2B, encodes one of the SERCA Ca (2+)-ATPases, which are intracellular pumps located in the sarcoplasmic or endoplasmic reticula of muscle cells. They are closely related to the plasma membrane Ca (2+)-ATPases, or PMCA. SERCA2 belongs to the large family of P-type cation pumps that couple ATP hydrolysis with cation transport across membranes. The SERCA2 gene is mapped to 12q24.11. SERCA2 was expressed in all specimens, with pronounced expression in the subnuclear aspect of basal epidermal keratinocytes. There was variable suprabasal expression. SERCA2 expression was also observed in the infundibulum and outer root sheath of hair follicles; germinative and mature cells of sebaceous glands; secretory coil and duct of eccrine glands; apocrine gland cells; and arrector pili muscle. In Darier disease skin, strong SERCA2 positivity was detected in the basal, suprabasal, and acantholytic lesional cells.

Overview

Product Name	Anti-SERCA2 ATPase/ATP2A2 Antibody
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-SERCA2 ATPase/ATP2A2 Antibody catalog # RP1054. Tested in IHC, WB applications. This antibody reacts with Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
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	P16615

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human SERCA2 ATPase, identical to the related mouse and rat sequences.
Predicted Reactive Species	Bovine
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).
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	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat, By Heat

Anti-SERCA2 ATPase/ATP2A2 Antibody (RP1054) Images

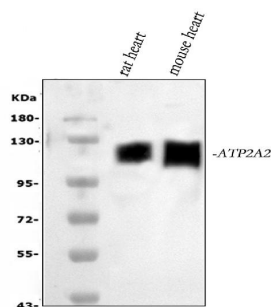


Figure 1. Western blot analysis of ATP2A2 using anti-ATP2A2 antibody (RP1054).

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 heart tissue lysates,

Lane 2: mouse heart 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-ATP2A2 antigen affinity purified polyclonal antibody (Catalog # RP1054) 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 ATP2A2 at approximately 115 kDa. The expected band size for ATP2A2 is at 115 kDa.

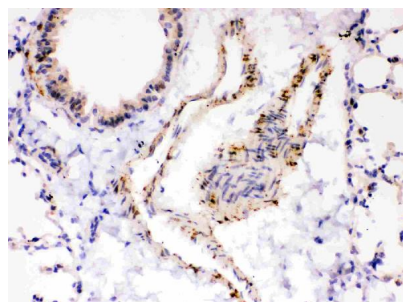


Figure 2. IHC analysis of ATP2A2 using anti-ATP2A2 antibody (RP1054).

ATP2A2 was detected in a paraffin-embedded section of Mouse Lung 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-ATP2A2 Antibody (RP1054) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

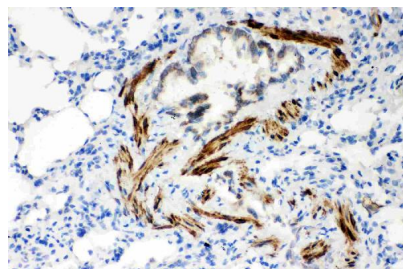


Figure 3. IHC analysis of ATP2A2 using anti-ATP2A2 antibody (RP1054).

ATP2A2 was detected in a paraffin-embedded section of Rat Lung 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-ATP2A2 Antibody (RP1054) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

1 Publications Citing This Product

1. PubMed ID: 24324360, Guo Y, Zeng Qc, Zhang Cq, Zhang Xz, Li Rx, Wu Jm, Guan J, Liu L, Zhang Xc, Li Jy, Wan Zm. Int J Med Sci. 2013 Nov 5;10(13):1837-45. Doi: 10.7150/Ijms.6786. Ecollection 2013. Extracellular Matrix Of Mechanically Stretched Cardiac Fibroblasts Improv...

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