

## Anti-SERCA1 ATPase/ATP2A1 Antibody Picoband®

Catalog Number: PA1719

### About ATP2A1

SERCA1 (SARCOPLASMIC RETICULUM Ca (2+)-ATPase 1), also called ATP2A1, is an enzyme that in humans is encoded by the ATP2A1 gene. This gene encodes one of the SERCA Ca (2+)-ATPases, which are intracellular pumps located in the sarcoplasmic or endoplasmic reticula of muscle cells. The SERCA1 gene is mapped on 16p11.2. This enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen, and is involved in muscular excitation and contraction. Zhang et al. (1995) determined that the human ATP2A1 gene is 26 kb long and contains 23 exons, 1 of which can be alternatively spliced. Overexpression of S1T, but not full-length SERCA1, induced ER stress in HeLa cells and amplified ER stress through the PERK (EIF2AK3)-EIF2A -ATF4 -CHOP (DDIT3) pathway. Mutations in this gene cause some autosomal recessive forms of Brody disease, characterized by increasing impairment of muscular relaxation during exercise.

### Overview

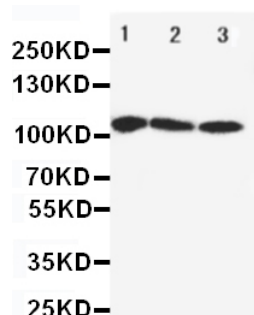
Product Name	Anti-SERCA1 ATPase/ATP2A1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SERCA1 ATPase/ATP2A1 Antibody catalog # PA1719. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg Thimerosal, 0.05mg NaN <sub>3</sub> . *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	O14983

### Technical Details

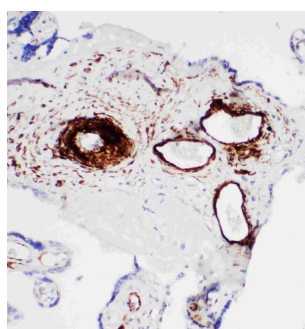
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human SERCA1 ATPase, identical to the related rat and mouse sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

	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	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Rat, Mouse Western blot, 0.1-0.5ug/ml, Human, Rat, Mouse

## Anti-SERCA1 ATPase/ATP2A1 Antibody Picoband® (PA1719) Images



Anti-SERCA1 ATPase antibody, PA1719, Western blotting Lane 1: Rat Skeletal Muscle Tissue Lysate Lane 2: PANC Cell Lysate Lane 3: U87 Cell Lysate



Anti-SERCA1 ATPase antibody, PA1719, IHC(P)IHC(P): Human Placenta Tissue



Anti-SERCA1 ATPase antibody, PA1719, IHC(P)IHC(P): Rat Skeletal Muscle Tissue

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