

**Anti-SERCA1 ATPase Antibody**  
Catalog # ABO12736**Specification****Anti-SERCA1 ATPase Antibody - Product Information**

Application	<b>WB, IHC</b>
Primary Accession	<a href="#">O14983</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Polyclonal</b>
Format	<b>Lyophilized</b>

**Description**

Rabbit IgG polyclonal antibody for Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (ATP2A1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-SERCA1 ATPase Antibody - Additional Information**

**Gene ID** 487

**Other Names**

Sarcoplasmic/endoplasmic reticulum calcium ATPase 1, SERCA1, SR Ca(2+)-ATPase 1, 3.6.3.8, Calcium pump 1, Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform, Endoplasmic reticulum class 1/2 Ca(2+) ATPase, ATP2A1

**Calculated MW**

110252 MW KDa

**Application Details**

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

**Subcellular Localization**

Endoplasmic reticulum membrane; Multi-pass membrane protein. Sarcoplasmic reticulum membrane; Multi-pass membrane protein.

**Tissue Specificity**

Skeletal muscle, fast twitch muscle (type II) fibers.

**Protein Name**

Sarcoplasmic/endoplasmic reticulum calcium ATPase 1

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>N.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human SERCA1 ATPase

(1-32aa MEAAHAKTTEECLAYFGVSETTGLTPDQVKRN), different from the related mouse and rat sequences by three amino acids.

#### Purification

Immunogen affinity purified.

#### Cross Reactivity

No cross reactivity with other proteins

#### Storage

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

### Anti-SERCA1 ATPase Antibody - Protein Information

**Name** ATP2A1 ([HGNC:811](#))

#### Function

Key regulator of striated muscle performance by acting as the major Ca(2+) ATPase responsible for the reuptake of cytosolic Ca(2+) into the sarcoplasmic reticulum. Catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen (By similarity). Contributes to calcium sequestration involved in muscular excitation/contraction (PubMed:[10914677](http://www.uniprot.org/citations/10914677)).

#### Cellular Location

Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P04191}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P04191}. Sarcoplasmic reticulum membrane {ECO:0000250|UniProtKB:P04191}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P04191}

#### Tissue Location

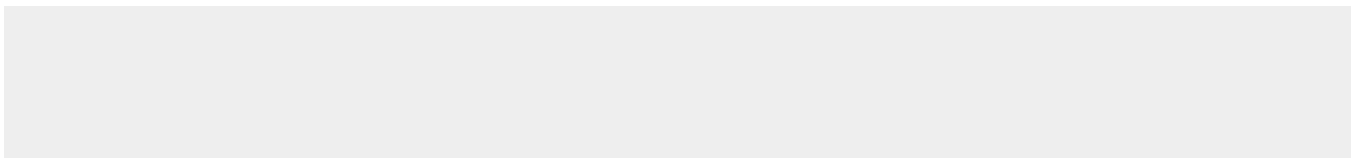
Skeletal muscle, fast twitch muscle (type II) fibers.

### Anti-SERCA1 ATPase Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

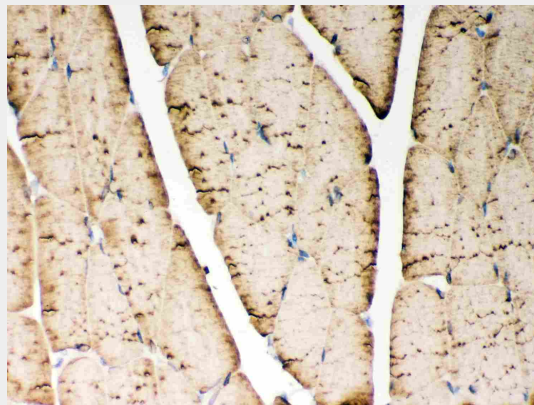
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-SERCA1 ATPase Antibody - Images

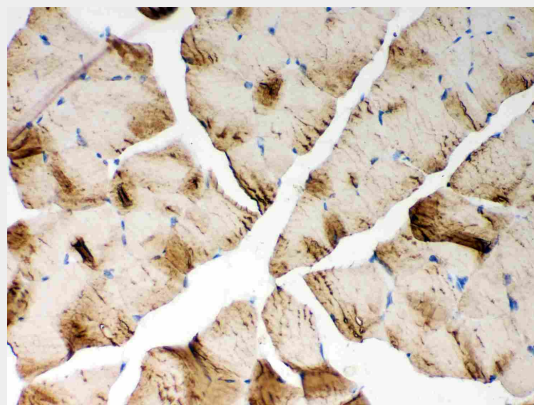




Anti- SERCA1 ATPase antibody, ABO12736, Western blotting All lanes: Anti SERCA1 ATPase (ABO12736) at 0.5ug/ml Lane 1: Rat Skeletal Muscle Tissue Lysate at 50ug Lane 2: Mouse Skeletal Muscle Tissue Lysate at 50ug Predicted bind size: 110KD Observed bind size: 110KD



Anti- SERCA1 ATPase antibody, ABO12736, IHC(P) IHC(P): Rat Skeletal Muscle Tissue



Anti- SERCA1 ATPase antibody, ABO12736, IHC(P) IHC(P): Mouse Skeletal Muscle Tissue

### Anti-SERCA1 ATPase Antibody - Background

SERCA1, 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 to 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. It has been determined that the human SERCA1 gene is 26 kb long and contains 23 exons, of which can

be alternatively spliced. Mutations in this gene cause some autosomal recessive forms of Brody disease, characterized by increasing impairment of muscular relaxation during exercise.