

**Anti-SERCA2 ATPase Antibody**  
Catalog # ABO11030**Specification****Anti-SERCA2 ATPase Antibody - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">P16615</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Sarcoplasmic/endoplasmic reticulum calcium ATPase 2(ATP2A2) 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-SERCA2 ATPase Antibody - Additional Information**

**Gene ID** 488

**Other Names**

Sarcoplasmic/endoplasmic reticulum calcium ATPase 2, SERCA2, SR Ca(2+)-ATPase 2, 3.6.3.8, Calcium pump 2, Calcium-transporting ATPase sarcoplasmic reticulum type, slow twitch skeletal muscle isoform, Endoplasmic reticulum class 1/2 Ca(2+) ATPase, ATP2A2, ATP2B

**Calculated MW**

114757 MW KDa

**Application Details**

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

**Subcellular Localization**

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

**Tissue Specificity**

Isoform 1 is widely expressed in smooth muscle and nonmuscle tissues such as in adult skin epidermis, with highest expression in liver, pancreas and lung, and intermediate expression in brain, kidney and placenta. Also expressed at lower levels in heart and skeletal muscle. Isoforms 2 and 3 are highly expressed in the heart and slow twitch skeletal muscle. Expression of isoform 3 is predominantly restricted to cardiomyocytes and in close proximity to the sarcolemma. Both isoforms are mildly expressed in lung, kidney, liver, pancreas and placenta. Expression of isoform 3 is amplified during monocytic differentiation and also observed in the fetal heart. .

**Protein Name**

Sarcoplasmic/endoplasmic reticulum calcium ATPase 2(SERCA2/SR Ca(2+)-ATPase 2)

**Contents**

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

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human SERCA2 ATPase(665-679aa QRDACLNARCFARVE), identical to the related rat and mouse sequences.

**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.**

**Sequence Similarities**

Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIA subfamily.

**Anti-SERCA2 ATPase Antibody - Protein Information**

**Name** ATP2A2 ([HGNC:812](#))

**Synonyms** ATP2B

**Function**

This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen (PubMed:[12542527](http://www.uniprot.org/citations/12542527), PubMed:[16402920](http://www.uniprot.org/citations/16402920)). Involved in autophagy in response to starvation. Upon interaction with VMP1 and activation, controls ER-isolation membrane contacts for autophagosome formation (PubMed:[28890335](http://www.uniprot.org/citations/28890335)). Also modulates ER contacts with lipid droplets, mitochondria and endosomes (PubMed:[28890335](http://www.uniprot.org/citations/28890335)). In coordination with FLVCR2 mediates heme-stimulated switching from mitochondrial ATP synthesis to thermogenesis (By similarity).

**Cellular Location**

Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:O55143}; Multi-pass membrane protein. Sarcoplasmic reticulum membrane; Multi-pass membrane protein. Note=Colocalizes with FLVCR2 at the mitochondrial-ER contact junction. {ECO:0000250|UniProtKB:O55143}

**Tissue Location**

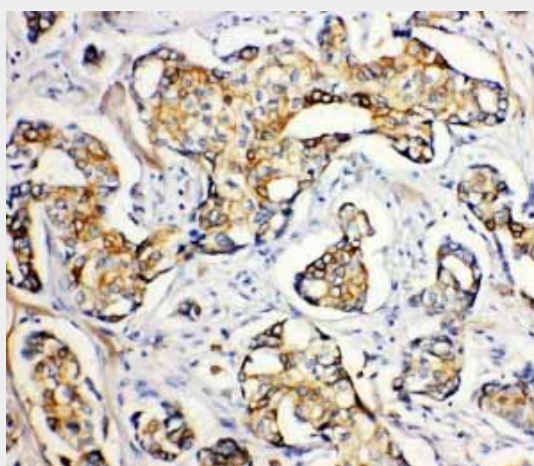
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## Anti-SERCA2 ATPase Antibody - Protocols

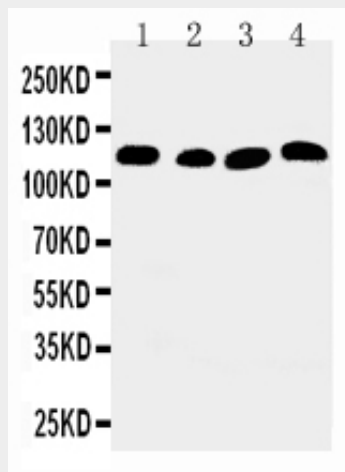
Provided below are standard protocols that you may find useful for product applications.

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

## Anti-SERCA2 ATPase Antibody - Images



Anti-SERCA2 ATPase antibody, ABO11030, IHC(P)IHC(P): Human Mammary Cancer Tissue



Anti-SERCA2 ATPase antibody, ABO11030, Western blotting Lane 1: Rat Skeletal Muscle Tissue Lysate Lane 2: Rat Kidney Tissue Lysate Lane 3: PANC Cell Lysate Lane 4: SMMC Cell Lysate

## Anti-SERCA2 ATPase Antibody - Background

SERCA2 (SARCOPLASMIC RETICULUM Ca<sup>2+</sup>-ATPase 2), also called ATP2A2, ATP2B, encodes one of the SERCA Ca<sup>2+</sup>-ATPases, which are intracellular pumps located in the sarcoplasmic or endoplasmic reticula of muscle cells. They are closely related to the plasma membrane Ca<sup>2+</sup>-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 on 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. Perilesional Darier disease skin was comparable to normal skin.