10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-SERCA2 ATPase Antibody

Catalog # ABO12737

Specification

Anti-SERCA2 ATPase Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P16615
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, 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
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

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human SERCA2 ATPase (1-32aa MENAHTKTVEEVLGHFGVNESTGLSLEQVKKL), identical to the related mouse and rat sequences.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, 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, PubMed:16402920). Involved in autophagy in response to starvation. Upon interaction with VMP1 and activation, controls ER-isolation membrane contacts for autophagosome formation (PubMed:28890335). Also modulates ER contacts with lipid droplets, mitochondria and endosomes (PubMed: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
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

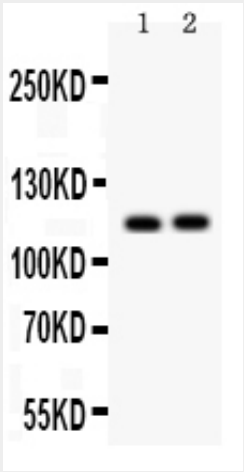
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-SERCA2 ATPase Antibody - Protocols

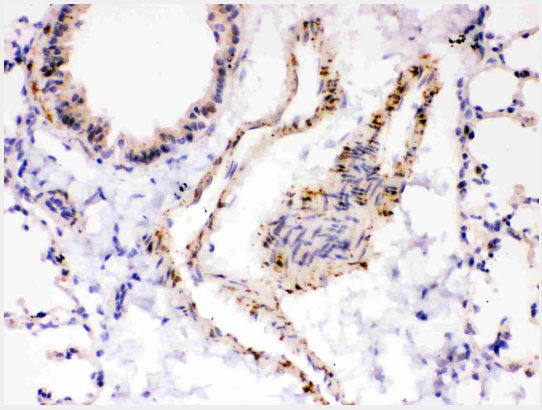
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-SERCA2 ATPase Antibody - Images

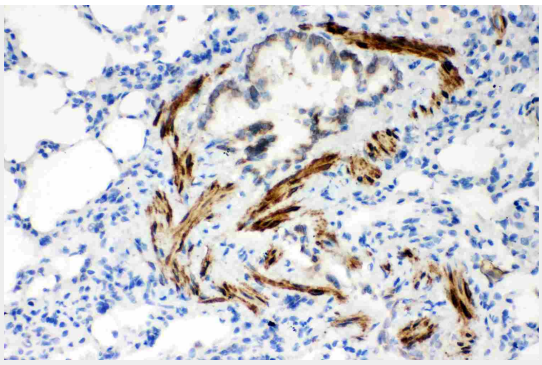


Anti- SERCA2 ATPase antibody, ABO12737, Western blottingAll lanes: Anti SERCA2 ATPase (ABO12737) at 0.5ug/mlLane 1: Rat Skeletal Muscle Tissue Lysate at 50ugLane 2: Mouse Skeletal Muscle Tissue Lysate at 50ugPredicted bind size: 115KDObserved bind size: 115KD



Anti- SERCA2 ATPase antibody, ABO12737,IHC(P)IHC(P): Mouse Lung Tissue

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Anti- SERCA2 ATPase antibody, ABO12737,IHC(P)IHC(P): Rat Lung Tissue

Anti-SERCA2 ATPase Antibody - Background

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 PMCAs. 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.