

Anti-SERCA1 ATPase Antibody

Catalog # ABO11029

Product Information

Application	WB, IHC-P
Primary Accession	O14983
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
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.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse
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.
Source	Eukaryota
Protein Name	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1(SERCA1/SR Ca(2+)-ATPase 1)
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg Na ₃ N.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human SERCA1 ATPase(665-680aa EQREACRRACCFARVE), 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.

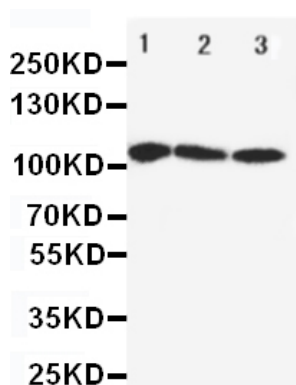
Protein Information

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).
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.

Background

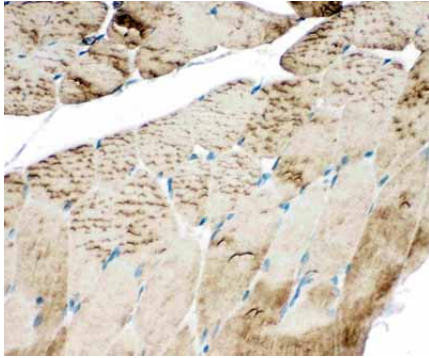
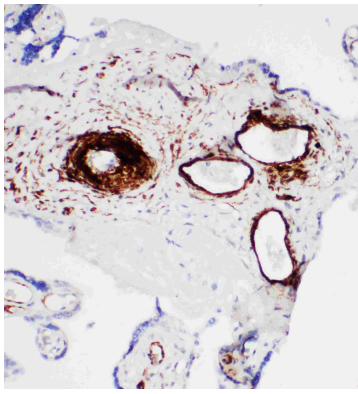
SERCA1(SARCOPLASMIC RETICULUM Ca(2+)-ATPase 1), also called ATP2A1, is an enzyme that in humans is encoded by the ATP2A1 gene. This gene encodes one of the SERCA Ca(2+)-ATPases, which are intracellular pumps located in the sarcoplasmic or endoplasmic reticula of muscle cells. The SERCA1 gene is mapped 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.

Images



Anti-SERCA1 ATPase antibody, ABO11029, Western blotting
Lane 1: Rat Skeletal Muscle Tissue Lysate Lane 2: PANC Cell Lysate Lane 3: U87 Cell Lysate

Anti-SERCA1 ATPase antibody, ABO11029, IHC(P)IHC(P):
Human Placenta Tissue



Anti-SERCA1 ATPase antibody, ABO11029, IHC(P)IHC(P):
Rat Skeletal Muscle Tissue

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.