

Product datasheet for **TA328789**

Atp2a2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	WB: 1:200-1:2000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide CTPNKPSRTSMSK, corresponding to amino acid residues 498- 510 of rat SERCA2. 2nd cytoplasmic loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	ATPase sarcoplasmic/endoplasmic reticulum Ca ²⁺ transporting 2
Database Link:	NP_001103609 Entrez Gene 488 Human Entrez Gene 11938 Mouse Entrez Gene 29693 Rat P11507



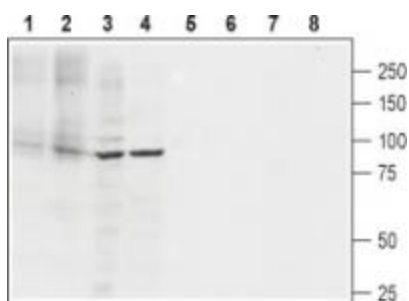
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Background:

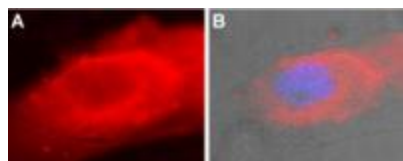
Three Ca²⁺ ATPases have been described in mammalian cells. They are located in the plasma membrane, endoplasmic reticulum or the Golgi apparatus. SERCA pumps are located in both the endoplasmic reticulum and in the Golgi membranes. They are known to transport two Ca²⁺ molecules per hydrolysis of one ATP. Their structure includes ten transmembrane domains and their main role is to remove cytoplasmic Ca²⁺ ions in order to promote muscle relaxation. In mammals three genes encode three SERCA pumps. Each transcript undergoes tissue-dependent alternative splicing. SERCA1a and 1b are expressed in adult and neonatal skeletal muscle respectively. SERCA2a is also expressed in skeletal muscle, while SERCA2b is ubiquitously expressed. SERCA3 is expressed in a limited number of non-muscle cells. Although all SERCAs are regulated, SERCA2b undergoes extensive regulation at the protein level, such as protein-protein interaction, phosphorylation and glycosylation. SERCA2 catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol into the sarcoplasmic reticulum lumen, and is involved in regulation of the contraction/relaxation cycle. Mutations in this gene cause Darier-White disease, also known as keratosis follicularis, an autosomal dominant skin disorder characterized by loss of adhesion between epidermal cells and abnormal keratinization.

Synonyms:

ATP2B; DAR; DD; DKFZp686P0211; FLJ20293; FLJ38063; MGC45367; SERCA2

Product images:


Western blot analysis of rat heart membranes (lanes 1 and 5), mouse heart membranes (lanes 2 and 6), rat PC12 pheochromocytoma cell line lysate (lanes 3 and 7) and human Jurkat T cell leukemia cell line lysate (lanes 4 and 8): 1- 4. Anti-SERCA2 antibody, (1:200). 5- 8. Anti-SERCA2 antibody, preincubated with the control peptide antigen.



Expression of SERCA1 in mouse C2C12 cells. Immunocytochemical staining of fixed and permeabilized mouse myoblast C2C12 cells. A. Cells were stained using Anti-SERCA2 antibody, (1:300) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Merged image of SERCA2 labeling with a live image of the cells. Cell nuclei were visualized using Hoechst 33342 (blue).