

Product name:	SERCA1 Rabbit Polyclonal Antibody
Cat number:	ABN17747
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human ATP2A1. AA range:548-597
Reactivity:	Human,Mouse,Rat,Salamander,Pig
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight:	100kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene encodes one of the SERCA Ca(2+)-ATPases, which are intracellular pumps located in the sarcoplasmic or endoplasmic reticula of muscle cells. 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. Mutations in this gene cause some autosomal recessive forms of Brody disease, characterized by increasing impairment of muscular relaxation during exercise. Alternative splicing results in three transcript variants encoding different isoforms. [provided by RefSeq, Oct 2013], catalytic activity: ATP + H(2)O + Ca(2+)(Cis) = ADP + phosphate + Ca(2+)(Trans)., developmental stage: Isoform SERCA1A accounts for more than 99% of SERCA1 isoforms expressed in adult, while isoform SERCA1B predominates in neo-natal fibers., disease: Defects in ATP2A1 are the cause of Brody disease (BD) [MIM:601003]. BD is an autosomal recessive myopathy characterized by increasing impairment of relaxation of fast twitch skeletal muscle during exercise., enzyme regulation: Reversibly inhibited by phospholamban (PLN) at low calcium concentrations. Dephosphorylated PLN decreases the apparent affinity of the ATPase for calcium. This inhibition is regulated by the phosphorylation of PLN., function: This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Contributes to calcium sequestration involved in muscular excitation/contraction., induction: Increased contractile activity leads to decrease SERCA1 expression, while decreased contractile activity leads to increase of SERCA1 expression., similarity: Belongs to the cation transport ATPase (P-type) family., similarity: Belongs to the cation transport ATPase (P-type) family. Type IIA subfamily., subunit: Associated with sarcolipin (SLN) and phospholamban (PLN)., tissue specificity: Skeletal muscle, fast twitch muscle (type II) fibers.,