



# SERCA1 Monoclonal Antibody

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| <b>Catalog No</b>                  | YP-mAb-00722                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Reactivity</b>                  | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Applications</b>                | WB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Gene Name</b>                   | ATP2A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Immunogen</b>                   | The antiserum was produced against synthesized peptide derived from human ATP2A1. AA range:548-597                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Specificity</b>                 | SERCA1 Monoclonal Antibody detects endogenous levels of SERCA1 protein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Formulation</b>                 | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>                      | Monoclonal, Mouse,IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purification</b>                | The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Dilution</b>                    | WB 1:500-1:2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Synonyms</b>                    | SR Ca(2+)-ATPase 1;SERCA1;EC:7.2.2.10;Calcium-transporting ATPase sarcoplasmic reticulum;ATP2A1;Sarcoplasmic/endoplasmic reticulum calcium ATPase 1;Calcium pump 1;Calcium-transporting ATPase sarcoplasmic reticulum type;fast twitch skeletal muscle isoform;Endoplasmic reticulum class 1/2 Ca(2+) AT                                                                                                                                                                                                                                           |
| <b>Observed Band</b>               | 100kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Calculated Molecular Weight</b> | 100kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cell Pathway</b>                | Endoplasmic reticulum membrane ; Multi-pass membrane protein .<br>Sarcoplasmic reticulum membrane ; Multi-pass membrane protein .                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Tissue Specificity</b>          | Skeletal muscle, fast twitch muscle (type II) fibers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Function</b>                    | 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 twist 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

#### 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],

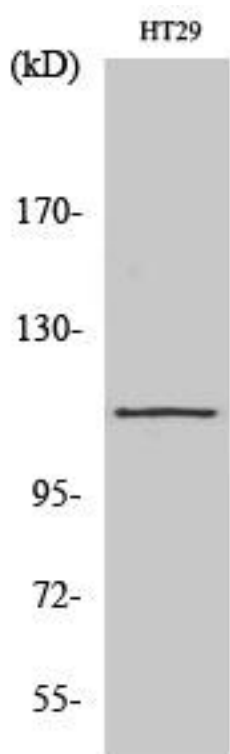
#### matters needing attention

Avoid repeated freezing and thawing!

#### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

### Products Images



Western Blot analysis of various cells using SERCA1 Monoclonal Antibody