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SERCA2 / ATP2A2 Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF3743a

Specification

SERCA2 / ATP2A2 Antibody (internal region) - Product Information

Application	**WB, IHC, IF**
Primary Accession	P16615
Other Accession	NP_001672.1, NP_733765.1, 488, 11938 (mouse), 29693 (rat)
Reactivity	**Human, Mouse, Rat**
Predicted	**Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**114757**

SERCA2 / ATP2A2 Antibody (internal region) - 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

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
SERCA2 / ATP2A2 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

SERCA2 / ATP2A2 Antibody (internal region) - 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:<a

href="http://www.uniprot.org/citations/12542527" target="_blank">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

SERCA2 / ATP2A2 Antibody (internal region) - 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

SERCA2 / ATP2A2 Antibody (internal region) - Images

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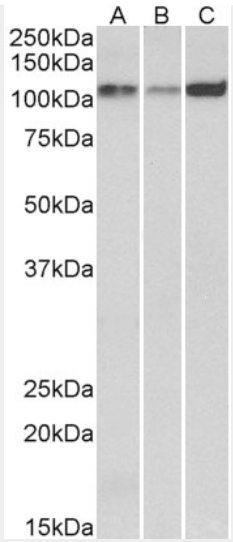
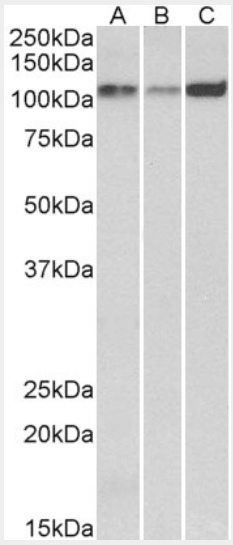
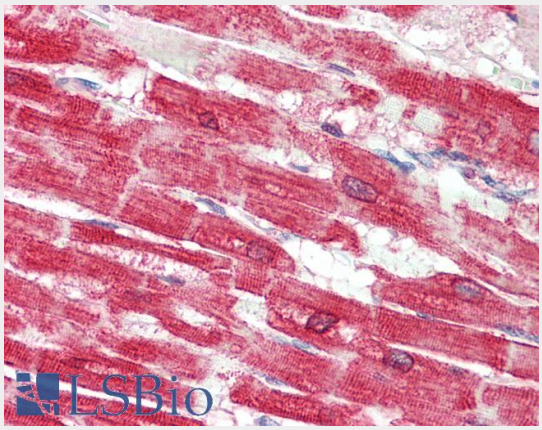


AF3743a (0.1 µg/ml) staining of Human (A), Mouse (B) and Rat (C) Heart lysates (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



EB11450 (0.1µg/ml) staining of Human (A), Mouse (B) and Rat (C) Heart lysates (35µg protein in RIPA buffer). Detected by chemiluminescence.



EB11450 (5µg/ml) staining of paraffin embedded Human Heart. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

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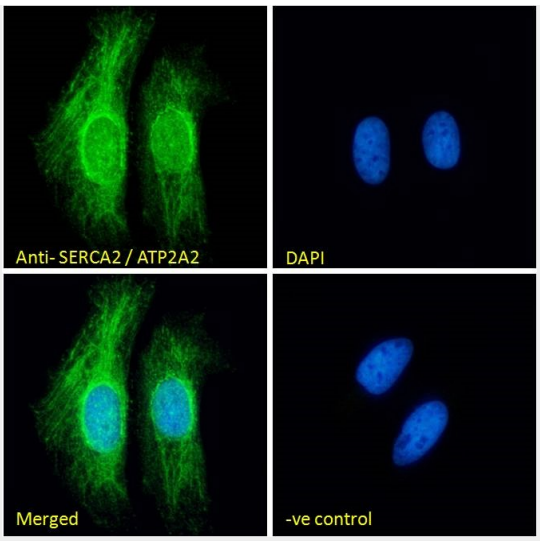

EB11450 mmunofluorescence analysis of paraformaldehyde fixed HeLa cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml), showing endoplasmic reticulum staining. The nuclear stain i

SERCA2 / ATP2A2 Antibody (internal region) - Background

This antibody is expected to recognize both reported isoforms (NP_001672.1; NP_733765.1).

SERCA2 / ATP2A2 Antibody (internal region) - References

Highly cooperative dependence of sarco/endoplasmic reticulum calcium ATPase SERCA2a pump activity on cytosolic calcium in living cells. Satoh K, Matsu-Ura T, Enomoto M, Nakamura H, Michikawa T, Mikoshiba K. J Biol Chem. 2011 Jun 10;286(23):20591-9. PMID: 21515674