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KD-Validated Anti-ATP2A2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1191

Specification

KD-Validated Anti-ATP2A2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P16615
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 115 kDa, observed, 110 kDa KDa**
Gene Name	**ATP2A2**
Aliases	**ATP2A2; ATPase Sarcoplasmic/Endoplasmic Reticulum Ca2+ Transporting 2; SERCA2; Sarcoplasmic/Endoplasmic Reticulum Calcium ATPase 2; Calcium Pump 2; ATP2B; Endoplasmic Reticulum Class 1/2 Ca(2+) ATPase; SR Ca(2+)-ATPase; DAR; Calcium-Transporting ATPase Sarcoplasmic Reticulum Type, Slow Twitch Skeletal Muscle Isoform; ATPase, Ca++ Transporting, Cardiac Muscle, Slow Twitch 2; ATPase Ca++ Transporting Cardiac Muscle Slow Twitch 2; ATPase, Ca++ Dependent, Slow-Twitch, Cardiac Muscle-2; Cardiac Ca2+ ATPase; EC 7.2.2.10; EC 3.6.3.8; EC 3.6.3; DD**
Immunogen	**A synthesized peptide derived from human SERCA2**

KD-Validated Anti-ATP2A2 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**488**

Other Names
Sarcoplasmic/endoplasmic reticulum calcium ATPase 2, SERCA2, SR Ca(2+)-ATPase 2, 7.2.2.10, Calcium pump 2, Calcium-transporting ATPase sarcoplasmic reticulum type, slow twitch skeletal muscle isoform, Endoplasmic reticulum class 1/2 Ca(2+) ATPase, ATP2A2 (HGNC:812), ATP2B

KD-Validated Anti-ATP2A2 Rabbit Monoclonal Antibody - 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: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

KD-Validated Anti-ATP2A2 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-ATP2A2 Rabbit Monoclonal Antibody - Images

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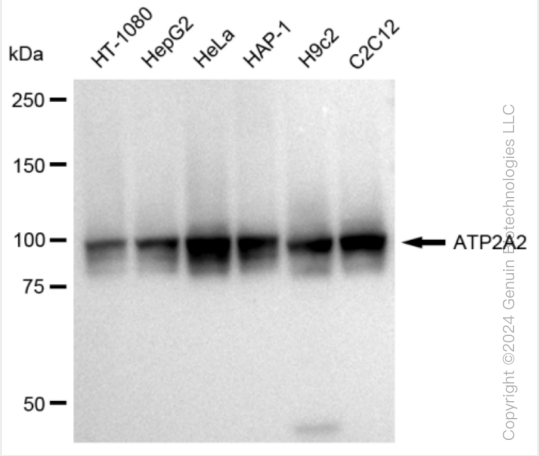
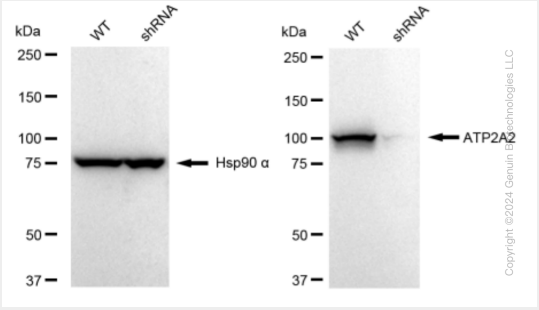
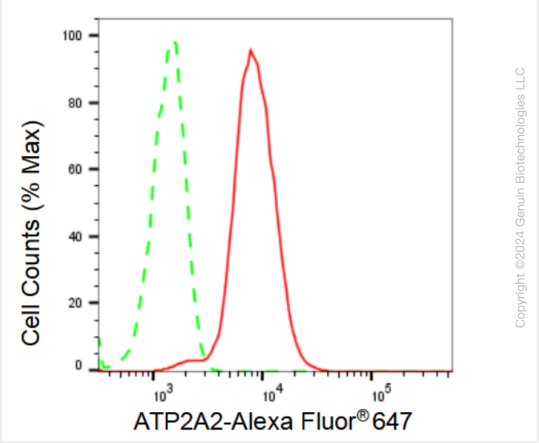


Western blotting analysis using anti-ATP2A2 antibody (Cat#AGI1191). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-ATP2A2 antibody (Cat#AGI1191, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-ATP2A2 antibody (Cat#AGI1191). ATP2A2 expression in wild type (WT) and ATP2A2 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-ATP2A2 antibody (Cat#AGI1191, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of ATP2A2 expression in HeLa cells using ATP2A2 antibody (Cat#AGI1191, 1:2,000). Green, isotype control; red, ATP2A2.

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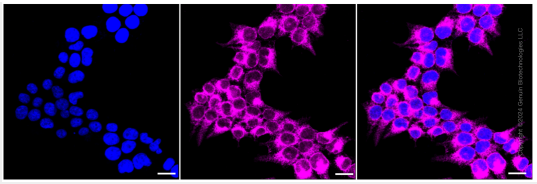

Immunocytochemical staining of Hela cells with ATP2A2 antibody (Cat#AGI1191, 1:1,000). Nuclei were stained blue with DAPI; ATP2A2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.