Anti-ATP2A1 / SERCA1 Antibody

ER1803-34

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 110 kDa

Description: Key regulator of striated muscle performance by acting as the major Ca2+ ATPase responsible for the reuptake of cytosolic Ca2+ into the sarcoplasmic reticulum. 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.

Immunogen: Synthetis peptide within mouse ATP2A1 aa 1-50 / 994.

Positive control: Mouse skeletal muscle tissue lysate, rat skeletal muscle tissue lysate, Human skeletal muscle tissue lysate, rat skeletal muscle tissue, human fetal skeletal muscle tissue, mouse skeletal muscle tissue.

Subcellular location: Endoplasmic reticulum membrane. Sarcoplasmic reticulum membrane.

Database links: SwissProt: O14983 Human | Q8R429 Mouse | Q64578 Rat

Recommended Dilutions:

WB	1:2,000
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

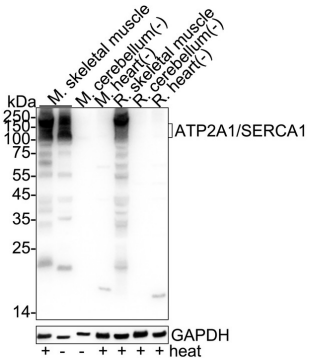

Fig1: Western blot analysis of ATP2A1 / SERCA1 on different lysates with Rabbit anti-ATP2A1 / SERCA1 antibody (ER1803-34) at 1/2,000 dilution.

Lane 1: Mouse skeletal muscle tissue lysate
Lane 2: Mouse skeletal muscle tissue lysate (no heat)
Lane 3: Mouse cerebellum tissue lysate (no heat) (negative)
Lane 4: Mouse heart tissue lysate (negative)
Lane 5: Rat skeletal muscle tissue lysate
Lane 6: Rat cerebellum tissue lysate (negative)
Lane 7: Rat heart tissue lysate (negative)

Notice: no heat means the lysate is not boiled.

Lysates/proteins at 40 µg/Lane.

Predicted band size: 110 kDa
Observed band size: 110 kDa

Exposure time: 2 seconds; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ER1803-34) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

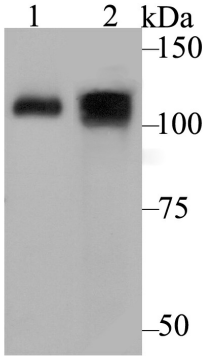

Fig2: Western blot analysis of ATP2A1 on different lysates using anti-ATP2A1 antibody at 1/500 dilution.
Positive control:
Lane 1: Mouse skeletal muscle tissue
Lane 2: Human skeletal muscle tissue

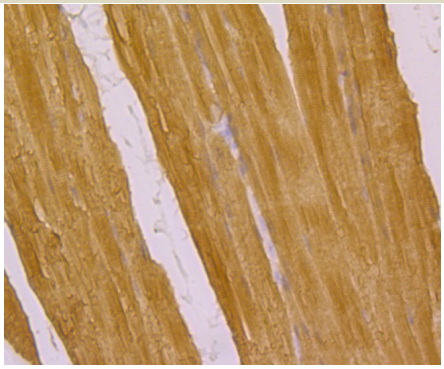

Fig3: Immunohistochemical analysis of paraffin-embedded rat skeletal muscle tissue using anti-ATP2A1 antibody. Counter stained with hematoxylin.

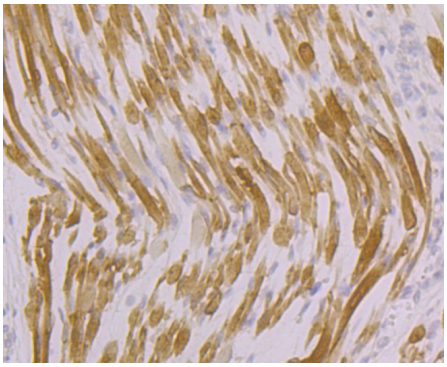

Fig4: Immunohistochemical analysis of paraffin-embedded human fetal skeletal muscle tissue using anti-ATP2A1 antibody. Counter stained with hematoxylin.

Fig5: Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue using anti-ATP2A1 antibody. Counter stained with hematoxylin.

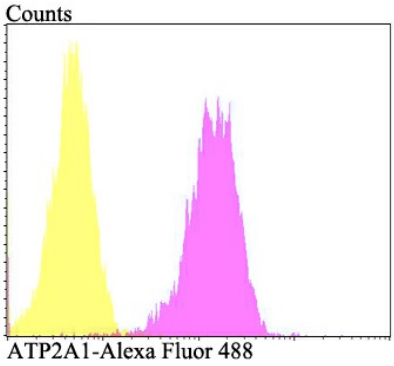

Fig6: Flow cytometric analysis of 293T cells with ATP2A1 antibody at 1/100 dilution (fuchsia) compared with an unlabelled control (cells without incubation with primary antibody; yellow). Alexa Fluor 488-conjugated goat anti-rabbit IgG was used as the secondary antibody.

Background References

1. Tupling A R et al. Enhanced Ca2+ transport and muscle relaxation in skeletal muscle from sarcolipin-null mice. Am J Physiol 301:C841-C849 (2011).
2. Bal N C et al. Sarcolipin is a newly identified regulator of muscle-based thermogenesis in mammals. Nat Med 18:1575-1579 (2012).