Data Sheet (Cat.No.TMPH-03766)

TargetMol

ATP2A2 Protein, Human, Recombinant (C-His)

General Information

Synonyms:	Calcium-transporting ATPase sarcoplasmic reticulum type, slow twitch skeletal muscle isoform;SR Ca(2+)-ATPase 2;ATP2B;ATP2A2;Sarcoplasmic/endoplasmic reticulum calcium ATPase 2;SERCA2;Endoplasmic reticulum class 1/2 Ca(2+) ATPase;Calcium pump 2
Expression Host:	E. coli
Molecular Weight:	55.2 kDa (Predicted)

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.

Preparation and Storage

Stability & Storage:

Samples are stable for up to twelve months from date of receipt at -20℃ to -80℃. Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Protein Background

This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Involved in autophagy in response to starvation. Upon interaction with VMP1 and activation, controls ER-isolation membrane contacts for autophagosome formation. Also modulates ER contacts with lipid droplets, mitochondria and endosomes.; Involved in the regulation of the contraction/relaxation cycle. Acts as a regulator of TNFSF11-mediated Ca(2+) signaling pathways via its interaction with TMEM64 which is critical for the TNFSF11-induced CREB1 activation and mitochondrial ROS generation necessary for proper osteoclast generation. Association between TMEM64 and SERCA2 in the ER leads to cytosolic Ca(2+) spiking for activation of NFATC1 and production of mitochondrial ROS, thereby triggering Ca(2+) signaling cascades that promote osteoclast differentiation and activation.

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