Datasheet for ABIN7552458

ATP2A2 Protein (AA 1-1042) (His tag)

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Overview

Quantity:	1 mg
Target:	ATP2A2
Protein Characteristics:	AA 1-1042
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATP2A2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant ATP2A2 Protein expressed in mammalian cells.
Sequence:	MENAHTKTVE EVLGHFGVNE STGLSLEQVK KLKERWGSNE LPAEEGKTLL ELVIEQFEDL LVRILLLAAC ISFVLAWFEE GEETITAFVE PFVILLILVA NAIVGVWQER NAENAIEALK EYEPEMGKVY RQDRKSVQRI KAKDIVPGDI VEIAVGDKVP ADIRLTSIKS TTLRVDQSIL TGESVSVIKH TDPVPDPRAV NQDKKNMLFS GTNIAAGKAM GVVVATGVNT EIGKIRDEMV ATEQERTPLQ QKLDEFGEQL SKVISLICIA VWIINIGHFN DPVHGGSWIR GAIYYFKIAV ALAVAAIPEG LPAVITTCLA LGTRRMAKKN AIVRSLPSVE TLGCTSVICS DKTGTLTTNQ MSVCRMFILD RVEGDTCSLN EFTITGSTYA PIGEVHKDDK PVNCHQYDGL VELATICALC NDSALDYNEA KGVYEKVGEA TETALTCLVE KMNVFDTELK GLSKIERANA CNSVIKQLMK KEFTLEFSRD RKSMSVYCTP NKPSRTSMSK MFVKGAPEGV IDRCTHIRVG STKVPMTSGV KQKIMSVIRE WGSGSDTLRC LALATHDNPL RREEMHLEDS ANFIKYETNL TFVGCVGMLD PPRIEVASSV KLCRQAGIRV IMITGDNKGT AVAICRRIGI FGQDEDVTSK AFTGREFDEL NPSAQRDACL NARCFARVEP SHKSKIVEFL QSFDEITAMT GDGVNDAPAL KKAEIGIAMG

Product Details

	SGTAVAKTAS EMVLADDNFS TIVAAVEEGR AIYNNMKQFI RYLISSNVGE VVCIFLTAAL GFPEALIPVQ LLWVNLVTDG LPATALGFNP PDLDIMNKPP RNPKEPLISG WLFFRYLAIG CYVGAATVGA AAWWFIAADG GPRVSFYQLS HFLQCKEDNP DFEGVDCAIF ESPYPMTMAL SVLVTIEMCN ALNSLSENQS LLRMPPWENI WLVGSICLSM SLHFLILYVE PLPLIFQITP LNVTQWLMVL KISLPVILMD ETLKFVARNY LEPGKECVQP ATKSCSFSAC TDGISWPFVL LIMPLVIWVY STDTNFSDMF WS **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	ATP2A2
Alternative Name:	ATP2A2 (ATP2A2 Products)
Background:	Sarcoplasmic/endoplasmic reticulum calcium ATPase 2 (SERCA2) (SR Ca(2+)-ATPase 2) (EC 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),FUNCTION:

Target Details

	This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen (PubMed:16402920, PubMed:12542527). 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). {ECO:0000250|UniProtKB:O55143, ECO:0000269|PubMed:12542527, ECO:0000269|PubMed:16402920, ECO:0000269|PubMed:28890335}., FUNCTION: [Isoform 2]: 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. {ECO:0000250|UniProtKB:O55143}.
Molecular Weight:	114.8 kDa
UniProt:	P16615
Pathways:	Myometrial Relaxation and Contraction, ER-Nucleus Signaling, Ribonucleoside Biosynthetic Process

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.

Handling

Expiry Date:	12 months