Datasheet for ABIN3131887

ATP2A2 Protein (AA 1-1044) (Strep Tag)

Go to Product page

Overview

Quantity:	250 µg
Target:	ATP2A2
Protein Characteristics:	AA 1-1044
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATP2A2 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
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 KVEGDTCSLN EFSITGSTYA PIGEVQKDDK PVKCHQYDGL VELATICALC NDSALDYNEA KGVYEKVGEA TETALTCLVE KMNVFDTELK GLSKIERANA CNSVIKQLMK KEFTLEFSRD RKSMSVYCTP NKPSRTSMSK MFVKGAPEGV IDRCTHIRVG STKVPMTPGV KQKIMSVIRE WGSGSDTLRC LALATHDNPL KREEMHLEDS ANFIKYETNL TFVGCVGMLD PPRIEVASSV KLCRQAGIRV IMITGDNKGT AVAICRRIGI FGQDEDVTSK AFTGREFDEL

SPSAQRDACL NARCFARVEP SHKSKIVEFL QSFDEITAMT GDGVNDAPAL KKSEIGIAMG SGTAVAKTAS EMVLADDNFS TIVAAVEEGR AIYNNMKQFI RYLISSNVGE VVCIFLTAAL GFPEALIPVQ LLWVNLVTDG LPATALGFNP PDLDIMNKPP RNPKEPLISG WLFFRYLAIG CYVGAATVGA AAWWFIAADG GPRVSFYQLS HFLQCKEDNP DFDGVDCAIF ESPYPMTMAL SVLVTIEMCN ALNSLSENQS LLRMPPWENI WLVGSICLSM SLHFLILYVE PLPLIFQITP LNLTQWLMVL KISLPVILMD ETLKFVARNY LEQPGKECVQ PATKSSCSLS ACTDGISWPF VLLIMPLVVW VYSTDTNFSD MFWS

Sequence without tag. The proposed Strep-Tag is based on experience s 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.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.

Product Details

- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, 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: 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 (By similarity). In coordination with FLVCR2 mediates heme-stimulated switching from mitochondrial ATP synthesis to thermogenesis. {ECO:0000250|UniProtKB:P16615, ECO:0000269|PubMed:22355118, ECO:0000269|PubMed:22971924, ECO:0000269|PubMed:32973183}., FUNCTION: [Isoform 2]: Involved in the regulation of the contraction/relaxation cycle (PubMed:23395171). 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 (PubMed:23395171). 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 (PubMed:23395171). {ECO:0000269|PubMed:23395171}.
Molecular Weight:	114.9 kDa
UniProt:	O55143

Target Details

Pathways:	Myometrial Relaxation and Contraction, ER-Nucleus Signaling, Ribonucleoside Biosynthetic Process

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months