Datasheet for ABIN3122855

ABCB7 Protein (AA 1-752) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	ABCB7
Protein Characteristics:	AA 1-752
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ABCB7 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MALLAIHSWR WAAAAVAFEK HKHSAVLTRA LVSMCGSGPR WSSSQRGASG SARLSQTTES LRNTTQQRWG KDNSRQLLDA TKALQTWPLI EKRTCWHGHA GGGLHTDPKE GLKDVDTRKI IKAMLSYVWP EDRPDLRARV AISLGFLGGA KAMNIVVPFM FKYAVDSLNQ MSGNMLNLSD APNTVATMAT AVLIGYGVSR AGAAFFNEVR NAVFGKVAQN SIRRIAKNVF LHLHNLDLGF HLSRQTGALS KAIDRGTRGI SFVLSALVFN LLPIVFEMML VSSVLYYKCG AQFALVTLGT LGAYTAFTVA VTRWRTRFRI EMNKADNDAG NAAIDSLLNY ETVKYFNNEK YEAQRYDGFL KTYETASLKS TSTLAMLNFG QNAIFSVGLT AIMVLASQGI VAGALTVGDL VMVNGLLFQL SLPLNFLGTV YRETRQALID MNTLFTLLKV DTRIKDKVMA PPLQITPQTA TVAFDNVHFE YIEGQKVLNG VSFEVPAGKK VAIVGGSGSG KSTIVRLLFR FYEPQKGSIY LAGQNLQDVS LESLRRAVGV VPQDAVLFHN TIYYNLLYGN INASPEEVYA VAKLAGLHDA ILRMPHGYDT QVGERGLKLS GGEKQRVAIA RAILKNPPVI LYDEATSSLD SITEETILGA MRDVVKHRTS IFIAHRLSTV VDADEIIVLS QGKVAERGTH YGLLANSSSI YSEMWHTQSN RVQNQDSLGW

	DAKKESLSKE EERKKLQEEI VNSVKGCGNC SC **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 by multi-step, protein-specific process to ensure correct folding and modification. • 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 will ensure that you receive a correctly folded 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. • The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer. • We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System

Product Details

	(ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Target Details

Target:	ABCB7
Alternative Name:	Abcb7 (ABCB7 Products)
Background:	Iron-sulfur clusters transporter ABCB7, mitochondrial (ATP-binding cassette sub-family B member 7, mitochondrial) (ATP-binding cassette transporter 7) (ABC transporter 7 protein),FUNCTION: Exports glutathione-coordinated iron-sulfur clusters such as [2Fe-2S]-(GS)4 cluster from the mitochondria to the cytosol in an ATP-dependent manner allowing the assembly of the cytosolic iron-sulfur (Fe/S) cluster-containing proteins and participates in iron homeostasis (PubMed:16424901, PubMed:16467350). Moreover, through a functional complex formed of ABCB7, FECH and ABCB10, also plays a role in the cellular iron homeostasis, mitochondrial function and heme biosynthesis (PubMed:30765471). In cardiomyocytes, regulates cellular iron homeostasis and cellular reactive oxygen species (ROS) levels through its interaction with COX4I1 (By similarity). May also play a role in hematopoiesis (PubMed:17192398). {ECO:0000250|UniProtKB:Q704E8, ECO:0000269|PubMed:16424901, ECO:0000269|PubMed:16467350, ECO:0000269|PubMed:17192398, ECO:0000269|PubMed:30765471}.
Molecular Weight:	82.6 kDa
UniProt:	Q61102
Pathways:	Transition Metal Ion Homeostasis

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.

Application Details

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. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)