Datasheet for ABIN3116341

LRRC8A Protein (AA 1-810) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	LRRC8A
Protein Characteristics:	AA 1-810
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This LRRC8A protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MIPVTELRYF ADTQPAYRIL KPWWDVFTDY ISIVMLMIAV FGGTLQVTQD KMICLPCKWV TKDSCNDSFR GWAAPGPEPT YPNSTILPTP DTGPTGIKYD LDRHQYNYVD AVCYENRLHW FAKYFPYLVL LHTLIFLACS NFWFKFPRTS SKLEHFVSIL LKCFDSPWTT RALSETVVEE SDPKPAFSKM NGSMDKKSST VSEDVEATVP MLQRTKSRIE QGIVDRSETG VLDKKEGEQA KALFEKVKKF RTHVEEGDIV YRLYMRQTII KVIKFILIIC YTVYYVHNIK FDVDCTVDIE SLTGYRTYRC AHPLATLFKI LASFYISLVI FYGLICMYTL WWMLRRSLKK YSFESIREES SYSDIPDVKN DFAFMLHLID QYDPLYSKRF AVFLSEVSEN KLRQLNLNNE WTLDKLRQRL TKNAQDKLEL HLFMLSGIPD TVFDLVELEV LKLELIPDVT IPPSIAQLTG LKELWLYHTA AKIEAPALAF LRENLRALHI KFTDIKEIPL WIYSLKTLEE LHLTGNLSAE NNRYIVIDGL RELKRLKVLR LKSNLSKLPQ VVTDVGVHLQ KLSINNEGTK LIVLNSLKKM ANLTELELIR CDLERIPHSI FSLHNLQEID LKDNNLKTIE EIISFQHLHR LTCLKLWYNH IAYIPIQIGN LTNLERLYLN RNKIEKIPTQ

	LFYCRKLRYL DLSHNNLTFL PADIGLLQNL QNLAITANRI ETLPPELFQC RKLRALHLGN NVLQSLPSRV GELTNLTQIE LRGNRLECLP VELGECPLLK RSGLVVEEDL FNTLPPEVKE RLWRADKEQA **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. • 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

Product Details

	System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	LRRC8A
Alternative Name:	LRRC8A (LRRC8A Products)
Background:	Volume-regulated anion channel subunit LRRC8A (Leucine-rich repeat-containing protein 8A) (HsLRRC8A) (Swelling protein 1),FUNCTION: Essential component of the volume-regulated anion channel (VRAC, also named VSOAC channel), an anion channel required to maintain a constant cell volume in response to extracellular or intracellular osmotic changes (PubMed:24725410, PubMed:29769723, PubMed:24790029, PubMed:26530471, PubMed:26824658, PubMed:28193731). The VRAC channel conducts iodide better than chloride and can also conduct organic osmolytes like taurine (PubMed:24725410, PubMed:30095067, PubMed:24790029, PubMed:26530471, PubMed:26824658, PubMed:28193731). Mediates efflux of amino acids, such as aspartate and glutamate, in response to osmotic stress (PubMed:28193731). LRRC8A and LRRC8D are required for the uptake of the drug cisplatin (PubMed:26530471). In complex with LRRC8C or LRRC8E, acts as a transporter of immunoreactive cyclic dinucleotide GMP-AMP (2'-3'-cGAMP), an immune messenger produced in response to DNA virus in the cytosol: mediates both import and export of 2'-3'-cGAMP, thereby promoting transfer of 2'-3'-cGAMP to bystander cells (PubMed:33171122). In contrast, complexes containing LRRC8D inhibit transport of 2'-3'-cGAMP (PubMed:33171122). Required for in vivo channel activity, together with at least one other family member (LRRC8B, LRRC8C, LRRC8D or LRRC8E), channel characteristics depend on the precise subunit composition (PubMed:24790029, PubMed:26824658, PubMed:28193731). Can form functional channels by itself (in vitro) (PubMed:26824658). Involved in B-cell development: required for the pro-B cell to pre-B cell transition (PubMed:14660746). Also required for T-cell development (By similarity). Required for myoblast differentiation: VRAC activity promotes membrane hyperpolarization and regulates insulin-stimulated glucose metabolism and oxygen consumption (By similarity). Also acts as a regulator of glucose-sensing in pancreatic beta cells: VRAC currents, generated in response to hypotonicity- or glucose-induced beta cell swelling, depolarize cells, thereby causing electrical excitation, leading to increase glucose sensitivity and insulin secretion (PubMed:29371604). Also plays a role in lysosome homeostasis by forming functional lysosomal VRAC channels in

Target Details

	response to low cytoplasmic ionic strength condition: lysosomal VRAC channels are necessary for the formation of large lysosome-derived vacuoles, which store and then expel excess water to maintain cytosolic water homeostasis (PubMed:31270356, PubMed:33139539). {ECO:0000250|UniProtKB:Q80WG5, ECO:0000269|PubMed:14660746, ECO:0000269|PubMed:24725410, ECO:0000269|PubMed:24790029, ECO:0000269|PubMed:26530471, ECO:0000269|PubMed:26824658, ECO:0000269|PubMed:28193731, ECO:0000269|PubMed:29371604, ECO:0000269|PubMed:29769723, ECO:0000269|PubMed:30095067, ECO:0000269|PubMed:31270356, ECO:0000269|PubMed:33139539, ECO:0000269|PubMed:33171122}.
Molecular Weight:	94.2 kDa
UniProt:	Q8IWT6

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

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months