Datasheet for ABIN3089153

ARHGEF2 Protein (AA 1-986) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	ARHGEF2
Protein Characteristics:	AA 1-986
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ARHGEF2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSRIESLTRA RIDRSRELAS KTREKEKMKE AKDARYTNGH LFTTISVSGM TMCYACNKSI TAKEALICPT CNVTIHNRCK DTLANCTKVK QKQQKAALLK NNTALQSVSL RSKTTIRERP SSAIYPSDSF RQSLLGSRRG RSSLSLAKSV STTNIAGHFN DESPLGLRRI LSQSTDSLNM RNRTLSVESL IDEAEVIYSE LMSDFEMDEK DFAADSWSLA VDSSFLQQHK KEVMKQQDVI YELIQTELHH VRTLKIMTRL FRTGMLEELH LEPGVVQGLF PCVDELSDIH TRFLSQLLER RRQALCPGST RNFVIHRLGD LLISQFSGPS AEQMCKTYSE FCSRHSKALK LYKELYARDK RFQQFIRKVT RPAVLKRHGV QECILLVTQR ITKYPLLISR ILQHSHGIEE ERQDLTTALG LVKELLSNVD EGIYQLEKGA RLQEIYNRMD PRAQTPVPGK GPFGREELLR RKLIHDGCLL WKTATGRFKD VLVLLMTDVL VFLQEKDQKY IFPTLDKPSV VSLQNLIVRD IANQEKGMFL ISAAPPEMYE VHTASRDDRS TWIRVIQQSV RTCPSREDFP LIETEDEAYL RRIKMELQQK DRALVELLRE KVGLFAEMTH FQAEEDGGSG MALPTLPRGL FRSESLESPR GERLLQDAIR EVEGLKDLLV GPGVELLLTP REPALPLEPD SGGNTSPGVT ANGEARTFNG SIELCRADSD

SSQRDRNGNQ LRSPQEEALQ RLVNLYGLLH GLQAAVAQQD TLMEARFPEG PERREKLCRA NSRDGEAGRA GAAPVAPEKQ ATELALLQRQ HALLQEELRR CRRLGEERAT EAGSLEARLR ESEQARALLE REAEEARRQL AALGQTEPLP AEAPWARRPV DPRRRSLPAG DALYLSFNPP QPSRGTDRLD LPVTTRSVHR NFEDRERQEL GSPEERLQDS SDPDTGSEEE GSSRLSPPHS PRDFTRMQDI PEETESRDGE AVASES

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

Product Details

	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 (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)
Grade:	Crystallography grade

Target Details

Target:	ARHGEF2
Alternative Name:	ARHGEF2 (ARHGEF2 Products)
Background:	Rho guanine nucleotide exchange factor 2 (Guanine nucleotide exchange factor H1) (GEF-H1) (Microtubule-regulated Rho-GEF) (Proliferating cell nucleolar antigen p40),FUNCTION: Activates Rho-GTPases by promoting the exchange of GDP for GTP. May be involved in epithelial barrier permeability, cell motility and polarization, dendritic spine morphology, antigen presentation, leukemic cell differentiation, cell cycle regulation, innate immune response, and cancer. Binds Rac-GTPases, but does not seem to promote nucleotide exchange activity toward Rac-GTPases, which was uniquely reported in PubMed:9857026. May stimulate instead the cortical activity of Rac. Inactive toward CDC42, TC10, or Ras-GTPases. Forms an intracellular sensing system along with NOD1 for the detection of microbial effectors during cell invasion by pathogens. Required for RHOA and RIP2 dependent NF-kappaB signaling pathways activation upon S.flexneri cell invasion. Involved not only in sensing peptidoglycan (PGN)-derived muropeptides through NOD1 that is independent of its GEF activity, but also in the activation of NF-kappaB by Shigella effector proteins (IpgB2 and OspB) which requires its GEF activity and the activation of RhoA. Involved in innate immune signaling transduction pathway promoting cytokine IL6/interleukin-6 and TNF-alpha secretion in macrophage upon stimulation by bacterial peptidoglycans, acts as a signaling intermediate between NOD2 receptor and RIPK2 kinase.

Target Details

	Contributes to the tyrosine phosphorylation of RIPK2 through Src tyrosine kinase leading to NF-kappaB activation by NOD2. Overexpression activates Rho-, but not Rac-GTPases, and increases paracellular permeability (By similarity). Involved in neuronal progenitor cell division and differentiation (PubMed:28453519). Involved in the migration of precerebellar neurons (By similarity). {ECO:0000250|UniProtKB:Q60875, ECO:0000250|UniProtKB:Q865S3, ECO:0000269|PubMed:19043560, ECO:0000269|PubMed:21887730, ECO:0000269|PubMed:28453519, ECO:0000269|PubMed:9857026}.
Molecular Weight:	111.5 kDa
UniProt:	Q92974
Pathways:	Negative Regulation of intrinsic apoptotic Signaling

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. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.

Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

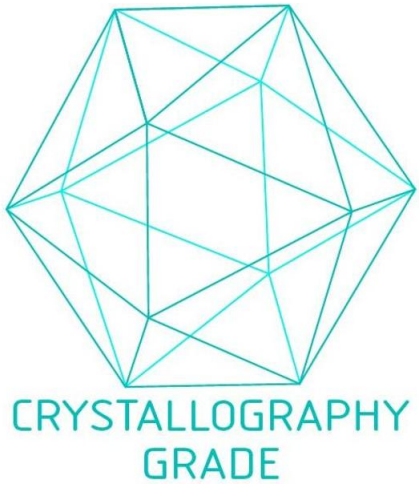

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process