Datasheet for ABIN3095077

RAPGEF2 Protein (AA 1-1499) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	RAPGEF2
Protein Characteristics:	AA 1-1499
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RAPGEF2 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	MKPLAIPANH GVMGQQEKHS LPADFTKLHL TDSLHPQVTH VSSSHSGCSI TSDSGSSSLS DIYQATESEA GDMDLSGLPE TAVDSEDDDD EEDIERASDP LMSRDIVRDC LEKDPIDRTD DDIEQLLEFM HQLPAFANMT MSVRRELCAV MVFAVVERAG TIVLNDGEEL DSWSVILNGS VEVTYPDGKA EILCMGNSFG VSPTMDKEYM KGVMRTKVDD CQFVCIAQQD YCRILNQVEK NMQKVEEEGE IVMVKEHREL DRTGTRKGHI VIKGTSERLT MHLVEEHSVV DPTFIEDFLL TYRTFLSSPM EVGKKLLEWF NDPSLRDKVT RVVLLWVNNH FNDFEGDPAM TRFLEEFENN LEREKMGGHL RLLNIACAAK AKRRLMTLTK PSREAPLPFI LLGGSEKGFG IFVDSVDSGS KATEAGLKRG DQILEVNGQN FENIQLSKAM EILRNNTHLS ITVKTNLFVF KELLTRLSEE KRNGAPHLPK IGDIKKASRY SIPDLAVDVE QVIGLEKVNK KSKANTVGGR NKLKKILDKT RISILPQKPY NDIGIGQSQD DSIVGLRQTK HIPTALPVSG TLSSSNPDLL QSHHRILDFS ATPDLPDQVL RVFKADQQSR YIMISKDTTA KEVVIQAIRE FAVTATPDQY SLCEVSVTPE GVIKQRRLPD QLSKLADRIQ LSGRYYLKNN METETLCSDE DAQELLRESQ ISLLQLSTVE

VATQLSMRNF ELFRNIEPTE YIDDLFKLRS KTSCANLKRF EEVINQETFW VASEILRETN QLKRMKIIKH FIKIALHCRE CKNFNSMFAI ISGLNLAPVA RLRTTWEKLP NKYEKLFQDL QDLFDPSRNM AKYRNVLNSQ NLQPPIIPLF PVIKKDLTFL HEGNDSKVDG LVNFEKLRMI AKEIRHVGRM ASVNMDPALM FRTRKKKWRS LGSLSQGSTN ATVLDVAQTG GHKKRVRRSS FLNAKKLYED AQMARKVKQY LSNLELEMDE ESLQTLSLQC EPATNTLPKN PGDKKPVKSE TSPVAPRAGS QQKAQSLPQP QQQPPPAHKI NQGLQVPAVS LYPSRKKVPV KDLPPFGINS PQALKKILSL SEEGSLERHK KQAEDTISNA SSQLSSPPTS PQSSPRKGYT LAPSGTVDNF SDSGHSEISS RSSIVSNSSF DSVPVSLHDE RRQRHSVSIV ETNLGMGRME RRTMIEPDQY SLGSYAPMSE GRGLYATATV ISSPSTEELS QDQGDRASLD AADSGRGSWT SCSSGSHDNI QTIQHQRSWE TLPFGHTHFD YSGDPAGLWA SSSHMDQIMF SDHSTKYNRQ NQSRESLEQA QSRASWASST GYWGEDSEGD TGTIKRRGGK DVSIEAESSS LTSVTTEETK PVPMPAHIAV ASSTTKGLIA RKEGRYREPP PTPPGYIGIP ITDFPEGHSH PARKPPDYNV ALQRSRMVAR SSDTAGPSSV QQPHGHPTSS RPVNKPQWHK PNESDPRLAP YQSQGFSTEE DEDEQVSAV

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human RAPGEF2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use

Product Details

	the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	RAPGEF2
Alternative Name:	RAPGEF2 (RAPGEF2 Products)
Background:	Functions as a guanine nucleotide exchange factor (GEF), which activates Rap and Ras family of small GTPases by exchanging bound GDP for free GTP in a cAMP-dependent manner. Serves as a link between cell surface receptors and Rap/Ras GTPases in intracellular signaling cascades. Acts also as an effector for Rap1 by direct association with Rap1-GTP thereby leading to the amplification of Rap1-mediated signaling. Shows weak activity on HRAS. It is controversial whether RAPGEF2 binds cAMP and cGMP (PubMed:23800469, PubMed:10801446) or not (PubMed:10608844, PubMed:10548487, PubMed:11359771). Its binding to ligand-activated beta-1 adrenergic receptor ADRB1 leads to the Ras activation through the G(s)-alpha signaling pathway. Involved in the cAMP-induced Ras and Erk1/2 signaling pathway that leads to sustained inhibition of long term melanogenesis by reducing dendrite extension and melanin synthesis. Provides also inhibitory signals for cell proliferation of melanoma cells and promotes their apoptosis in a cAMP-independent nanner. Regulates cAMP-induced neuritogenesis by mediating the Rap1/B-Raf/ERK signaling through a pathway that is independent on both PKA and RAPGEF3/RAPGEF4. Involved in neuron migration and in the formation of the major forebrain fiber connections forming the corpus callosum, the anterior commissure and the hippocampal commissure during brain development. Involved in neuronal growth factor (NGF)-induced sustained activation of Rap1 at late endosomes and in

Target Details

	brain-derived neurotrophic factor (BDNF)-induced axon outgrowth of hippocampal neurons. Plays a role in the regulation of embryonic blood vessel formation and in the establishment of basal junction integrity and endothelial barrier function. May be involved in the regulation of the vascular endothelial growth factor receptor KDR and cadherin CDH5 expression at allantois endothelial cell-cell junctions. {ECO:0000269|PubMed:10548487, ECO:0000269|PubMed:10608844, ECO:0000269|PubMed:10608883, ECO:0000269|PubMed:10801446, ECO:0000269|PubMed:10934204, ECO:0000269|PubMed:11359771, ECO:0000269|PubMed:12391161, ECO:0000269|PubMed:16272156, ECO:0000269|PubMed:17724123, ECO:0000269|PubMed:21840392, ECO:0000269|PubMed:23800469}.
Molecular Weight:	168.4 kDa Including tag.
UniProt:	Q9Y4G8
Pathways:	Neurotrophin Signaling Pathway

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 gurantee though.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

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