Datasheet for ABIN3136731

GRK5 Protein (AA 1-590) (His tag)

Go to Product page

1 Image

Overview

Quantity:	1 mg
Target:	GRK5
Protein Characteristics:	AA 1-590
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This GRK5 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MELENIVANT VLLKAREGGG GKRKGKSKKW KEILKFPHIS QCEDLRRTID RDYYSLCDKQ PIGRLLFRQF CETRPGLECY IQFLDLVAEY EITPDENLGA KGKEIMTKYL TPKSPVFIAQ VGQDLVSQTE KKLLQSPCKE LFSACAQSVH DYLKGDPFHE YLDSMYFDRF LQWKWLERQP VTKNTFRQYR VLGKGGFGEV CACQVRATGK MYACKRLEKK RIKKRKGESM ALNEKQILEK VNSQFVVNLA YAYETKDALC LVLTIMNGGD LKFHIYNMGN PGFEEERALF YAAEILCGLE DLHRENTVYR DLKPENILLD DYGHIRISDL GLAVKIPEGD LIRGRVGTVG YMAPEVLNNQ RYGLSPDYWG LGCLIYEMIE GQSPFRGRKE KVKREEVDRR VLETEEVYSS KFSEEAKSIC NMLLTKDSKQ RLGCQEEGAA EVKRHPFFRN MNFKRLEAGM LDPPFVPDPR AVYCKDVLDI EQFSTVKGVN LDHTDDDFYS KFSTGSVPIP WQNEMIETEC FKELNVFGPN GTLSPDLNRS QPPEPPKKGL FHRLFRRQHQ SNSKSSPTPK TSCNHRINSN HINSNSTGSS **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

Product Details

Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse Grk5 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 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:	GRK5
Alternative Name:	Grk5 (GRK5 Products)
Background:	Serine/threonine kinase that phosphorylates preferentially the activated forms of a variety of G-protein-coupled receptors (GPCRs). Such receptor phosphorylation initiates beta-arrestin-mediated receptor desensitization, internalization, and signaling events leading to their down-regulation. Phosphorylates a variety of GPCRs, including adrenergic receptors, muscarinic acetylcholine receptors (more specifically Gi-coupled M2/M4 subtypes), dopamine receptors and opioid receptors. In addition to GPCRs, also phosphorylates various substrates: Hsc70-interacting protein/ST13, TP53/p53, HDAC5, and arrestin-1/ARRB1. Phosphorylation of ARRB1 by GRK5 inhibits G-protein independent MAPK1/MAPK3 signaling downstream of 5HT4-receptors. Phosphorylation of HDAC5, a repressor of myocyte enhancer factor 2 (MEF2) leading to nuclear export of HDAC5 and allowing MEF2-mediated transcription. Phosphorylation of TP53/p53, a crucial tumor suppressor, inhibits TP53/p53-mediated apoptosis. Phosphorylation of ST13 regulates internalization of the chemokine receptor. Phosphorylates rhodopsin (RHO) (in vitro) and a non G-protein-coupled receptor, LRP6 during Wnt signaling (in vitro). {ECO:0000269|PubMed:10624964, ECO:0000269|PubMed:14565944, ECO:0000269|PubMed:18711143, ECO:0000269|PubMed:19478075}.
Molecular Weight:	68.7 kDa Including tag.
UniProt:	Q8VEB1
Pathways:	Myometrial Relaxation and Contraction, Regulation of G-Protein Coupled Receptor Protein 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 gurantee though.
Comment:	Protein has not been tested for activity yet. 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)

Images

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