

Datasheet for ABIN3092859

GRK5 Protein (AA 1-590) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	GRK5
Protein Characteristics:	AA 1-590
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This GRK5 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	<p>MELNIVANT VLLKAREGGG GKRKGKSKKW KEILKFP HIS QCEDLRRTID RDYCSLCDKQ</p> <p>PIGRLLFRQF CETRPGLECY IQFLDSVAEY EVTPDEKLGE KGKEIMTKYL TPKSPVFIAQ</p> <p>VGQDLVSQTE EKLLQKPCKE LFSACAQSVH EYLRGEPFHE YLDSMFFDRF LQWKWLERQP</p> <p>VTKNTFRQYR VLGGKGFGGEV CACQVRATGK MYACKRLEKK RIKKRKGESM ALNEKQILEK</p> <p>VNSQFVVNLA YAYETKDALC LVLTIMNGGD LKFHIYNMGN PGFEEERALF YAAEILCGLE</p> <p>DLHRENTVYR DLKPENILLD DYGHIRISDL GLAVKIPEGD LIRGRVGTVG YMAPEVLNNQ</p> <p>RYGLSPDYWG LGCLİYEMIE GQSPFRGRKE KVKREEVDRR VLETEEVYSH KFSEEAKSIC</p> <p>KMLLTKDAKQ RLGCQEEGAA EVKRHPFFRN MNFKRLEAGM LDPPFVPDPR AVYCKDVLDI</p> <p>EQFSTVKGVN LDHTDDDFYS KFSTGVSVIP WQNEMIETEC FKELNVFGPN GTLPPDLNRN</p> <p>HPPEPPKKGL LQRLFKRQHQ NNSKSSPSSK TSFNHHINSN HVSSNSTGSS</p>

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 System (ALiCE®).

Purity:

> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade:

custom-made

Target Details

Target:	GRK5
Alternative Name:	GRK5 (GRK5 Products)
Background:	<p>G protein-coupled receptor kinase 5 (EC 2.7.11.16) (G protein-coupled receptor kinase GRK5),FUNCTION: 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:19661922, ECO:0000269 PubMed:19801552, ECO:0000269 PubMed:20038610, ECO:0000269 PubMed:20124405, ECO:0000269 PubMed:21728385}.</p>
Molecular Weight:	67.8 kDa
UniProt:	P34947
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 guarantee though.
Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>During lysate production, the cell wall and other cellular components that are not required for</p>

Application Details

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