Datasheet for ABIN3136803

PRKAG2 Protein (AA 1-566) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PRKAG2
Protein Characteristics:	AA 1-566
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PRKAG2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MGSAAMDTKK KKEVSSPGGS SGKKNPSLKR RSLRVHIPDL SSFAMPLLDG DVENSEKHSS RKVDSPFSSG SPSRGLFSRG PQPRPSSPVS APVRPKTSPG SPKTVFPFSY QESPPRSPRR MSFSGIFRSS SKESSPNSNP STSPGGIRFF SRSRKTSSVS SSPSTPTQVT KQHPFPLESY KQEPERPESR IYASSSPPDT GQRFCLAFQS PARPPLASPT YHAPLRTAVL AAAPGPAEAG MLEKLEFQEE EDSESGVYMR FMRSHKCYDI VPTSSKLVVF DTTLQVKKAF FALVANGVRA APLWESKKQS FVGMLTITDF INILHRYYKS PMVQIYELEE HKIETWRELY LQETFKPLVN ISPDASLFDA VYSLIKNKIH RLPVIDPISG NALYILTHKR ILKFLQLFMS DMPKPAFMKQ NLDELGIGTY HNIAFIHPDT PIIKALNIFV ERRISALPVV DESGKVVDIY SKFDVINLAA EKTYNNLDIT VTQALQHRSQ YFEGVVKCSK LETLETIVDR IVRAEVHRLV VVNEADSIVG IISLSDILQA LILTPAGAKQ KETETE **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 Prkag2 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:	PRKAG2
Alternative Name:	Prkag2 (PRKAG2 Products)
Background:	AMP/ATP-binding subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton, probably by indirectly activating myosin. Gamma non-catalytic subunit mediates binding to AMP, ADP and ATP, leading to activate or inhibit AMPK: AMP-binding results in allosteric activation of alpha catalytic subunit (PRKAA1 or PRKAA2) both by inducing phosphorylation and preventing dephosphorylation of catalytic subunits. ADP also stimulates phosphorylation, without stimulating already phosphorylated catalytic subunit. ATP promotes dephosphorylation of catalytic subunit, rendering the AMPK enzyme inactive (By similarity). {ECO:0000250}.
Molecular Weight:	63.9 kDa Including tag.
UniProt:	Q91WG5
Pathways:	AMPK Signaling, Cellular Glucan Metabolic Process, Ribonucleoside Biosynthetic Process, Regulation of Carbohydrate Metabolic Process, Warburg Effect

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

Handling

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