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



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.

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:

Grade:

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.

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

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage: -	%0 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

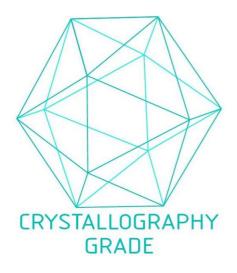


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process