Datasheet for ABIN3118671

PERK Protein (AA 30-1116) (rho-1D4 tag)

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1 Image

Overview

Quantity:	1 mg
Target:	PERK (EIF2AK3)
Protein Characteristics:	AA 30-1116
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PERK protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	AGRARGLPAP TAEAAFGLGA AAAPTSATRV PAAGAVAAAE VTVEDAEALP AAAGEQEPRG PEPDDETELR PRGRSLVIIS TLDGRIAALD PENHGKKQWD LDVGSGSLVS SSLSKPEVFG NKMIIPSLDG ALFQWDQDRE SMETVPFTVE SLLESSYKFG DDVVLVGGKS LTTYGLSAYS GKVRYICSAL GCRQWDSDEM EQEEDILLLQ RTQKTVRAVG PRSGNEKWNF SVGHFELRYI PDMETRAGFI ESTFKPNENT EESKIISDVE EQEAAIMDIV IKVSVADWKV MAFSKKGGHL EWEYQFCTPI ASAWLLKDGK VIPISLFDDT SYTSNDDVLE DEEDIVEAAR GATENSVYLG MYRGQLYLQS SVRISEKFPS SPKALESVTN ENAIIPLPTI KWKPLIHSPS RTPVLVGSDE FDKCLSNDKF SHEEYSNGAL SILQYPYDNG YYLPYYKRER NKRSTQITVR FLDNPHYNKN IRKKDPVLLL HWWKEIVATI LFCIIATTFI VRRLFHPHPH RQRKESETQC QTENKYDSVS GEANDSSWND IKNSGYISRY LTDFEPIQCL GRGGFGVVFE AKNKVDDCNY AIKRIRLPNR ELAREKVMRE VKALAKLEHP GIVRYFNAWL EAPPEKWQEK MDEIWLKDES TDWPLSSPSP MDAPSVKIRR MDPFATKEHI EIIAPSPQRS RSFSVGISCD QTSSSESQFS PLEFSGMDHE

DISESVDAAY NLQDSCLTDC DVEDGTMDGN DEGHSFELCP SEASPYVRSR ERTSSSIVFE DSGCDNASSK EEPKTNRLHI GNHCANKLTA FKPTSSKSSS EATLSISPPR PTTLSLDLTK NTTEKLQPSS PKVYLYIQMQ LCRKENLKDW MNGRCTIEER ERSVCLHIFL QIAEAVEFLH SKGLMHRDLK PSNIFFTMDD VVKVGDFGLV TAMDQDEEEQ TVLTPMPAYA RHTGQVGTKL YMSPEQIHGN SYSHKVDIFS LGLILFELLY PFSTQMERVR TLTDVRNLKF PPLFTQKYPC EYVMVQDMLS PSPMERPEAI NIIENAVFED LDFPGKTVLR QRSRSLSSSG TKHSRQSNNS HSPLPSN

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 EIF2AK3 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:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
2. The best performing detergent is used for solubilization and the proteins are purified via their

Product Details

	rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot. 3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. 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:	PERK (EIF2AK3)
Alternative Name:	EIF2AK3 (EIF2AK3 Products)
Background:	Metabolic-stress sensing protein kinase that phosphorylates the alpha subunit of eukaryotic translation initiation factor 2 (eIF-2-alpha/EIF2S1) on 'Ser-52' during the unfolded protein response (UPR) and in response to low amino acid availability. Converts phosphorylated eIF-2-alpha/EIF2S1 either in a global protein synthesis inhibitor, leading to a reduced overall utilization of amino acids, or to a translation initiation activator of specific mRNAs, such as the transcriptional activator ATF4, and hence allowing ATF4-mediated reprogramming of amino acid biosynthetic gene expression to alleviate nutrient depletion. Serves as a critical effector of unfolded protein response (UPR)-induced G1 growth arrest due to the loss of cyclin-D1 (CCND1). Involved in control of mitochondrial morphology and function. {ECO:0000250|UniProtKB:Q9Z2B5}.
Molecular Weight:	123.3 kDa Including tag.
UniProt:	Q9NZJ5
Pathways:	Hormone Transport, ER-Nucleus Signaling, Positive Regulation of Endopeptidase Activity, Hepatitis C

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.

Application Details

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)

Images

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