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Datasheet for ABIN3094343 PAK2 Protein (AA 2-212) (His tag)

Image



Overview

Quantity:	1 mg
Target:	PAK2
Protein Characteristics:	AA 2-212
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PAK2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	SDNGELEDKP PAPPVRMSST IFSTGGKDPL SANHSLKPLP SVPEEKKPRH KIISIFSGTE
	KGSKKKEKER PEISPPSDFE HTIHVGFDAV TGEFTGMPEQ WARLLQTSNI TKLEQKKNPQ
	AVLDVLKFYD SNTVKQKYLS FTPPEKDGFP SGTPALNAKG TEAPAVVTEE EDDDEETAPP
	VIAPRPDHTK SIYTRSVIDP VPAPVGDSHV D
	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 PAK2 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.

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	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:
	 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.
	 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:	PAK2
Alternative Name:	PAK2 (PAK2 Products)

Background:	Serine/threonine protein kinase that plays a role in a variety of different signaling pathways
	including cytoskeleton regulation, cell motility, cell cycle progression, apoptosis or proliferation.
	Acts as downstream effector of the small GTPases CDC42 and RAC1. Activation by the binding

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	of active CDC42 and RAC1 results in a conformational change and a subsequent
	autophosphorylation on several serine and/or threonine residues. Full-length PAK2 stimulates
	cell survival and cell growth. Phosphorylates MAPK4 and MAPK6 and activates the
	downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration.
	Phosphorylates JUN and plays an important role in EGF-induced cell proliferation.
	Phosphorylates many other substrates including histone H4 to promote assembly of H3.3 and
	H4 into nucleosomes, BAD, ribosomal protein S6, or MBP. Additionally, associates with
	ARHGEF7 and GIT1 to perform kinase-independent functions such as spindle orientation
	control during mitosis. On the other hand, apoptotic stimuli such as DNA damage lead to
	caspase-mediated cleavage of PAK2, generating PAK-2p34, an active p34 fragment that
	translocates to the nucleus and promotes cellular apoptosis involving the JNK signaling
	pathway. Caspase-activated PAK2 phosphorylates MKNK1 and reduces cellular translation.
	{ECO:0000269 PubMed:12853446, ECO:0000269 PubMed:15234964,
	EC0:0000269 PubMed:16617111, EC0:0000269 PubMed:19923322,
	EC0:0000269 PubMed:21177766, EC0:0000269 PubMed:21317288,
	EC0:0000269 PubMed:21724829, EC0:0000269 PubMed:9171063}.
Molecular Weight:	24.0 kDa Including tag.
UniProt:	Q13177
Pathways:	MAPK Signaling, RTK Signaling, TCR Signaling, Fc-epsilon Receptor Signaling Pathway,
	Regulation of Lipid Metabolism by PPARalpha
Application Details	
Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies

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:	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
Londling	
Handling	
Format:	Liquid

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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

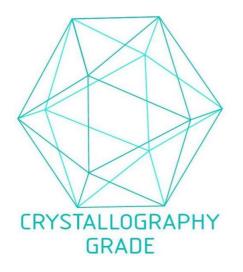


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process