Datasheet for ABIN3135341

PAK3 Protein (PAK3) (AA 1-559) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	PAK3
Protein Characteristics:	AA 1-559
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PAK3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MSDSLDNEEK PPAPPLRMNS NNRDSSALNH SSKPLPMAPE EKNKKARLRS IFPGGGDKTN KKKEKERPEI SLPSDFEHTI HVGFDAVTGE FTPDLYGSQM CPGKLPEGIP EQWARLLQTS NITKLEQKKN PQAVLDVLKF YDSKETVNNQ KYMSFTSGDK SAHGYIAAHQ SNTKTASEPP LAPPVSEEED EEEEEEEDDN EPPPVIAPRP EHTKSIYTRS VVESIASPAA PNKEDIPPSA ENANSTTLYR NTDRQRKKSK MTDEEILEKL RSIVSVGDPK KKYTRFEKIG QGASGTVYTA LDIATGQEVA IKQMNLQQQP KKELIINEIL VMRENKNPNI VNYLDSYLVG DELWVVMEYL AGGSLTDVVT ETCMDEGQIA AVCRECLQAL DFLHSNQVIH RDIKSDNILL GMDGSVKLTD FGFCAQITPE QSKRSTMVGT PYWMAPEVVT RKAYGPKVDI WSLGIMAIEM VEGEPPYLNE NPLRALYLIA TNGTPELQNP ERLSAVFRDF LNRCLEMDVD RRGSAKELLQ HPFLKLAKPL SSLTPLIIAA KEAIKNSSR **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:	PAK3
Alternative Name:	Pak3 (PAK3 Products)
Background:	Serine/threonine-protein kinase PAK 3 (EC 2.7.11.1) (Beta-PAK) (CDC42/RAC effector kinase PAK-B) (p21-activated kinase 3) (PAK-3),FUNCTION: Serine/threonine protein kinase that plays a role in a variety of different signaling pathways including cytoskeleton regulation, cell migration, or cell cycle regulation. Plays a role in dendrite spine morphogenesis as well as synapse formation and plasticity (PubMed:25851601). Acts as a downstream effector of the small GTPases CDC42 and RAC1. Activation by the binding of active CDC42 and RAC1 results in a conformational change and a subsequent autophosphorylation on several serine and/or threonine residues. Phosphorylates MAPK4 and MAPK6 and activates the downstream target MAPKAPK5, a regulator of F-actin polymerization and cell migration. Additionally, phosphorylates TNNI3/troponin I to modulate calcium sensitivity and relaxation kinetics of thin myofilaments. May also be involved in early neuronal development. In hippocampal neurons, necessary for the formation of dendritic spines and excitatory synapses, this function is dependent on kinase activity and may be exerted by the regulation of actomyosin contractility through the phosphorylation of myosin II regulatory light chain (MLC) (PubMed:15800193). {ECO:0000269|PubMed:12242269, ECO:0000269|PubMed:15574732, ECO:0000269|PubMed:15800193, ECO:0000269|PubMed:17537723, ECO:0000269|PubMed:20540949, ECO:0000269|PubMed:25851601}.
Molecular Weight:	62.4 kDa
UniProt:	Q61036

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:	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

Application Details

	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!
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