Datasheet for ABIN3136079

DAP Kinase 1 Protein (AA 1-1442) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	DAP Kinase 1 (DAPK1)
Protein Characteristics:	AA 1-1442
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DAP Kinase 1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MTVFRQENVD DYYDTGEELG SGQFAVVKKC REKSTGLQYA AKFIKKRRTK SSRRGVSRED IEREVSILKE IRHPNVITLH EVYENKTDVI LILELVAGGE LFDFLAEKES LTEEEATEFL KQILSGVYYL HSLQIAHFDL KPENIMLLDR NVPKPRIKII DFGLAHKIDF GNEFKNIFGT PEFVAPEIVN YEPLGLEADM WSIGVITYIL LSGASPFLGD TKQETLANVS AVNYDFEEEF FRNTSTLAKD FIRRLLVKDP KKRMTIQDSL QHPWIKPKDT QQALSRKASA VNMEKFKKFA ARKKWKQSVR LISLCQRLSR SFLSRSNMSV ARSDDTLDEE DSFVMKAIIH AINDDNVPGL QHLLGSLSSY DVNQPNKHGT PPLLIAAGCG NIQMLQLLIK RGSRIDVQDK GGSNAIYWAS RHGHVDTLKF LNENKCPLDV KDKSGETALH VAARYGHADV VQLLCSFGSN PDFQDKEEET PLHCAAWHGY YSVAKALCEV GCNVNIKNRE GETPLLTASA RGYHDIVECL AEHGADLNAS DKDGHIALHL AVRRCQMEVI KTLLGHGSFV DFQDRHGNTP LHVACKDGSA PIVVALCEAS CNLDISNKYG RTPLHLAANN GILDVVRYLC LMGANVEALT SDGKTAEDLA KAEQHEHVAG LLARLRKDTH RGLFIQQLRP TQNLQPRIKL KLFGHSGSGK STLVESLKCG LLRSFFRRRR PRLSSTNSTR

FPPSPLAAKP TVSVSINNLY PGCENVSVRS RSMMFEPGLT KGMLEVFVAP SHHLHCSTDD QSTKAIDIQN AYLNGVGDFS VWEFSGNPVY FCCYDYFAAN DPTSIHIIVF SLEEPYEIQL NQVIFWLSFL KSLVPVEEPI AFGGKLKNPL RVVLVATHAD IMNIPRPAGG EFGYDKDTSL LKEIRNRFGN DLHVSNKLFV LDAGASGSKD IKVLRNHLQE IRSQIVSGCS PMTHLCEKII STLPSWRKLN GPNQLMSLQQ FVYDVQDQLN PLASEDDLRR IAQQLHSTGE INIMQSETVQ DVLLLDPRWL CTNVLGKLLS VETPRALHHY RGRYTMEDIQ RLVPDSDVEE LLQILDAMDI CARDLSSGTM VDIPALIKTD SLQRSWADEE DEVMVYGGVR IVPVEHLTPF PCGIFHKVQV NLCRWIHQQS AEGDADIRLW VSGCRIANRG AELLVLLVNH GQGIEVQVRG LETEKIKCCL LLDSVCSTIE TVMATTLPGL LTVKHYLSPQ QLREHHEPVM VYQPRDFFRA QTLKESSLTN TMGGYKESFS SITCFGCHDV YSQASLGMDI HASDLSLLTR RKLSRLLDPP DPMGKDWCLL AMNLGLPDMV AKHNVNNRAS RDFLPSPVHA LLQEWTSYPE STVGILISKL RELGRRDAAD FLLKASSVFK INLDGNGQEA YASSCNSGTS YNSISSVVSR RDSHAWTPLY DL

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 by multi-step, protein-specific process to ensure correct folding and modification.
- 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 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.

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

Product 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!

Concentration:

- 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.
- We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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:	≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Target Details

Target:	DAP Kinase 1 (DAPK1)
Alternative Name:	Dapk1 (DAPK1 Products)
Background:	Death-associated protein kinase 1 (DAP kinase 1) (EC 2.7.11.1),FUNCTION: Calcium/calmodulin-dependent serine/threonine kinase involved in multiple cellular signaling pathways that trigger cell survival, apoptosis, and autophagy. Regulates both type I apoptotic and type II autophagic cell deaths signal, depending on the cellular setting. The former is caspase-dependent, while the latter is caspase-independent and is characterized by the accumulation of autophagic vesicles. Phosphorylates PIN1 resulting in inhibition of its catalytic activity, nuclear localization, and cellular function. Phosphorylates TPM1, enhancing stress fiber formation in endothelial cells. Phosphorylates STX1A and significantly decreases its binding to STXBP1. Phosphorylates PRKD1 and regulates JNK signaling by binding and activating PRKD1 under oxidative stress. Phosphorylates BECN1, reducing its interaction with BCL2 and BCL2L1 and promoting the induction of autophagy. Phosphorylates TSC2, disrupting the TSC1-TSC2

Target Details

	complex and stimulating mTORC1 activity in a growth factor-dependent pathway. Phosphorylates RPS6, MYL9 and DAPK3 (By similarity). Acts as a signaling amplifier of NMDA receptors at extrasynaptic sites for mediating brain damage in stroke. Cerebral ischemia recruits DAPK1 into the NMDA receptor complex and it phosphorylates GRINB at Ser-1303 inducing injurious Ca(2+) influx through NMDA receptor channels, resulting in an irreversible neuronal death. Required together with DAPK3 for phosphorylation of RPL13A upon interferon-gamma activation which is causing RPL13A involvement in transcript-selective translation inhibition. {ECO:0000250, ECO:0000269|PubMed:11485996, ECO:0000269|PubMed:18806755, ECO:0000269|PubMed:20141836, ECO:0000269|PubMed:23071094}.
Molecular Weight:	161.4 kDa
UniProt:	Q80YE7
Pathways:	MAPK Signaling, Interferon-gamma Pathway

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 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. If you have a special request, please contact us.

Handling

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

