Datasheet for ABIN3094173

Nemo-Like Kinase Protein (NLK) (AA 1-527) (Strep Tag)

Go to Product page

1 Image

Overview

Quantity:	1 mg
Target:	Nemo-Like Kinase (NLK)
Protein Characteristics:	AA 1-527
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Nemo-Like Kinase protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MSLCGARANA KMMAAYNGGT SAAAAGHHHH HHHHLPHLPP PHLHHHHHPQ HHLHPGSAAA VHPVQQHTSS AAAAAAAAAA AAAMLNPGQQ QPYFPSPAPG QAPGPAAAAP AQVQAAAAAT VKAHHHQHSH HPQQQLDIEP DRPIGYGAFG VVWSVTDPRD GKRVALKKMP NVFQNLVSCK RVFRELKMLC FFKHDNVLSA LDILQPPHID YFEEIYVVTE LMQSDLHKII VSPQPLSSDH VKVFLYQILR GLKYLHSAGI LHRDIKPGNL LVNSNCVLKI CDFGLARVEE LDESRHMTQE VVTQYYRAPE ILMGSRHYSN AIDIWSVGCI FAELLGRRIL FQAQSPIQQL DLITDLLGTP SLEAMRTACE GAKAHILRGP HKQPSLPVLY TLSSQATHEA VHLLCRMLVF DPSKRISAKD ALAHPYLDEG RLRYHTCMCK CCFSTSTGRV YTSDFEPVTN PKFDDTFEKN LSSVRQVKEI IHQFILEQQK GNRVPLCINP QSAAFKSFIS STVAQPSEMP PSPLVWE **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.**

Product Details

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 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

Product Details

	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)
Grade:	Crystallography grade

Target Details

Target:	Nemo-Like Kinase (NLK)
Alternative Name:	NLK (NLK Products)
Background:	Serine/threonine-protein kinase NLK (EC 2.7.11.24) (Nemo-like kinase) (Protein LAK1),FUNCTION: Serine/threonine-protein kinase that regulates a number of transcription factors with key roles in cell fate determination (PubMed:14960582, PubMed:12482967, PubMed:15004007, PubMed:15764709, PubMed:20061393, PubMed:20874444, PubMed:21454679). Positive effector of the non-canonical Wnt signaling pathway, acting downstream of WNT5A, MAP3K7/TAK1 and HIPK2 (PubMed:15004007, PubMed:15764709). Negative regulator of the canonical Wnt/beta-catenin signaling pathway (PubMed:12482967). Binds to and phosphorylates TCF7L2/TCF4 and LEF1, promoting the dissociation of the TCF7L2/LEF1/beta-catenin complex from DNA, as well as the ubiquitination and subsequent proteolysis of LEF1 (PubMed:21454679). Together these effects inhibit the transcriptional activation of canonical Wnt/beta-catenin target genes (PubMed:12482967, PubMed:21454679). Negative regulator of the Notch signaling pathway (PubMed:20118921). Binds to and phosphorylates NOTCH1, thereby preventing the formation of a transcriptionally active ternary complex of NOTCH1, RBPJ/RBPSUH and MAML1 (PubMed:20118921). Negative regulator of the MYB family of transcription factors (PubMed:15082531). Phosphorylation of MYB leads to its subsequent proteolysis while phosphorylation of MYBL1 and MYBL2 inhibits their interaction with the coactivator CREBBP (PubMed:15082531). Other transcription factors may also be inhibited by direct phosphorylation of CREBBP itself (PubMed:15082531). Acts downstream of IL6 and MAP3K7/TAK1 to phosphorylate STAT3, which is in turn required for activation of NLK by MAP3K7/TAK1 (PubMed:15004007, PubMed:15764709). Upon IL1B stimulus, cooperates with ATF5 to activate the transactivation activity of C/EBP subfamily members (PubMed:25512613). Phosphorylates ATF5 but also stabilizes ATF5 protein levels in a kinase-independent manner (PubMed:25512613). Acts as an inhibitor of the mTORC1 complex in response to osmotic stress by mediating phosphorylation of RPTOR, thereby preventing recruitment of the mTORC1 complex to lysosomes (PubMed:26588989).

Target Details

	{ECO:0000269|PubMed:12482967, ECO:0000269|PubMed:14960582, ECO:0000269|PubMed:15004007, ECO:0000269|PubMed:15082531, ECO:0000269|PubMed:15764709, ECO:0000269|PubMed:20061393, ECO:0000269|PubMed:20118921, ECO:0000269|PubMed:20874444, ECO:0000269|PubMed:21454679, ECO:0000269|PubMed:25512613, ECO:0000269|PubMed:26588989}.
Molecular Weight:	58.3 kDa
UniProt:	Q9UBE8
Pathways:	Ubiquitin Proteasome 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 Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

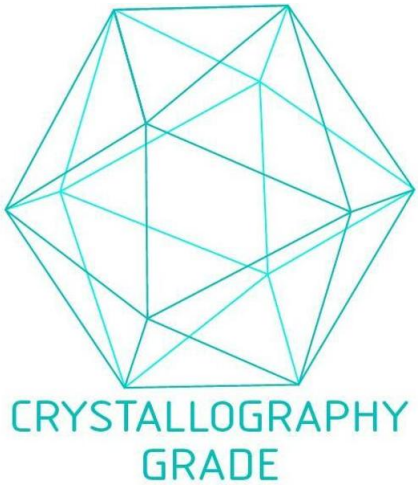

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process