Datasheet for ABIN3094173

Nemo-Like Kinase Protein (NLK) (AA 1-527) (His tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	Nemo-Like Kinase (NLK)
Protein Characteristics:	AA 1-527
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Nemo-Like Kinase protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

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. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

Product Details

Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Human NLK 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:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. 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. 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:	>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:	Nemo-Like Kinase (NLK)
Alternative Name:	NLK (NLK Products)
Background:	Serine/threonine-protein kinase that regulates a number of transcription factors with key roles in cell fate determination. Positive effector of the non-canonical Wnt signaling pathway, acting downstream of WNT5A, MAP3K7/TAK1 and HIPK2. Activation of this pathway causes binding to and phosphorylation of the histone methyltransferase SETDB1. The NLK-SETDB1 complex subsequently interacts with PPARG, leading to methylation of PPARG target promoters at histone H3K9 and transcriptional silencing. The resulting loss of PPARG target gene transcription inhibits adipogenesis and promotes osteoblastogenesis in mesenchymal stem cells (MSCs). Negative regulator of the canonical Wnt/beta-catenin signaling pathway. 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. Together these effects inhibit the transcriptional activation of canonical Wnt/beta-catenin target genes. Negative regulator of the Notch signaling pathway. Binds to and phosphorylates NOTCH1, thereby preventing the formation of a transcriptionally active ternary complex of NOTCH1, RBPJ/RBPSUH and MAML1. Negative regulator of the MYB family of transcription factors. Phosphorylation of MYB leads to its subsequent proteolysis while phosphorylation of MYBL1 and MYBL2 inhibits their interaction with the coactivator CREBBP. Other transcription factors may also be inhibited by direct phosphorylation of CREBBP itself. Acts downstream of IL6 and MAP3K7/TAK1 to phosphorylate STAT3, which is in turn required for activation of NLK by MAP3K7/TAK1. Upon IL1B stimulus, cooperates with ATF5 to activate the transactivation activity of C/EBP subfamily members. Phosphorylates ATF5 but also stabilizes ATF5 protein levels in a kinase-independent manner (PubMed:25512613). {ECO:0000250|UniProtKB:O54949, ECO:0000269|PubMed:12482967, ECO:0000269|PubMed:14960582, ECO:0000269|PubMed:15004007, ECO:0000269|PubMed:15764709, ECO:0000269|PubMed:17952062, ECO:0000269|PubMed:20061393, ECO:0000269|PubMed:20118921, ECO:0000269|PubMed:20874444, ECO:0000269|PubMed:21454679, ECO:0000269|PubMed:25512613}.
Molecular Weight:	59.2 kDa Including tag.
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 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

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