Datasheet for ABIN3134941

NLR Family, Pyrin Domain Containing 1B (NLRP1B) (AA 1-1233) protein (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	NLR Family, Pyrin Domain Containing 1B (NLRP1B)
Protein Characteristics:	AA 1-1233
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	His tag
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	MEESPPKQKS NTKVAQHEGQ QDLNTTRHMN VELKHRPKLE RHLKLGMIPV VYMKQGEEIL YPAQSLREEN LIQNFTSLLL LQKLCPKDPE NMIRKSWASC VPEEGGHMIN IQDLFGPNIG TQKEPQLVII EGAAGIGKST LARLVKRAWK EGQLYRDHFQ HVFFFSCREL AQCKKLSLAE LIAQGQEVPT APINQILSHP EKLLFILDGI DEPAWVLADQ NPELCLHWSQ RQPVHTLLGS LLGKSILPEA FFLLTTRTTA LQKFIPSLPM PCQVEVLGFS GIERENYFYK YFANQRHAIT AFMMVESNPV LLTLCEVPWV CWLVCTCLKK QMEQGRVLSL KSQTTTALCL KYLSLTIPDK HRRTQVKALC SLAAEGIWKR RTLFSESDLC KQGLDEDAVA TFLKTGVLQK QASSLSYSFA HLCLQEFFAA ISCILEDSEE RHGNMEMDRI VETLVERYGR QNLFEAPTVR FLFGLLGKEG VKGMEKLFSC SLHGKTNLKL LWHILVKSQP HQPPCLGLLH CLYENQDMEL LTHVMHDLQG TIVPGPNDTA HTVLQTNVKH LVVQTDMELM VATFCIQFYC HVRTLQLNME KQQGYALISP RMVLYRWTPI TNASWEILFY NLKFTRNLEG LDLSGNSLRY SVVQSLCNTL RYPGCQLKTL WLVKCGLTSR YCSLLASVLS AHSSLTELYL QLNDLGDDGV RMLCEGLRNP VCNLSILWLD

	LSSLSAQVIT ELRTLEEKNP KLYIRSIWMP HMMVPTENMD EEAILTTLKQ QRQESGDKPM EILGTEEDFW GPTGPVATEL VDRVRNLYRM PQMMVPTENM DEEDILTSFK QQRQQSGANP MEILGTEEDF WGPIGPVATE VVYRERNLYR VQLPMAGSYH CPSTRLHFVV TRAVTIEIEF CAWSQFLDKT PLQQSHMVVG PLFDIKAEQG AVTAVYLPHF VSLKDTKAST FDFKVAHFQE HGMVLETPDR VKPGYTVLKN PSFSPMGVVL RIIPAARHFI PITSITLIYY RVNQEEVTLH LYLVPNDCTI QKAIDDEEMK FQFVRINKPP PVDNLFIGSR YIVSGSENLE ITPKELELCY RSSKEFQLFS EIYVGNMGSE IKLQIKNKKH MKLIWEALLK PGDLRPALPR IAQALKDAPS LLHFMDQHRE QLVARVTSVD PLLDKLHGLV LNEESYEAVR AENTNQDKMR KLFNLSRSWS RACKDLFYQA LKETHPHLVM DLLEKSGGVS LGS **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. • Mouse Nlrp1b 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

Product Details

	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:	NLR Family, Pyrin Domain Containing 1B (NLRP1B)
Alternative Name:	Nlrp1b (NLRP1B Products)
Background:	As the sensor component of the NLRP1 inflammasome, plays a crucial role in innate immunity and inflammation. In response to pathogens and other damage-associated signals, initiates the formation of the inflammasome polymeric complex, made of Nlrp1b, CASP1, and possibly PYCARD. Recruitment of proCASP1 to the inflammasome promotes its activation and CASP1-catalyzed IL1B and IL18 maturation and secretion in the extracellular milieu. Activation of NLRP1 inflammasome is also required for HMGB1 secretion. The active cytokines and HMGB1 stimulate inflammatory responses. Inflammasomes can also induce pyroptosis, an inflammatory form of programmed cell death (PubMed:19651869, PubMed:21170303, PubMed:22753929, PubMed:22536155, PubMed:23818853). Activated by cleavage by Bacillus anthracis lethal toxin (LT) endopeptidase component (PubMed:19124602, PubMed:19651869, PubMed:19949100, PubMed:22536155, PubMed:23818853,PubMed:24935976, PubMed:24492532). Activated by metabolic inhibitors, such as 2-deoxy-D-glucose and sodium azide, by nutrient deprivation and hypoxia, possibly due to a decrease in cytosolic ATP (PubMed:23230290, PubMed:24935976). Also activated by Toxoplasma gondii (PubMed:24218483). Not activated by muramyl dipeptide, nor by full-length bacterial peptidoglycan (PubMed:22753929). Primary mediator of macrophage susceptibility to LT. In response to Bacillus anthracis infection, macrophages and dendritic cells release IL1B and undergo pyroptosis, an inflammatory form of programmed cell death. This early inflammatory response to the toxin increases resistance to infection by B. anthracis spores (PubMed:16429160, PubMed:19949100, PubMed:21170303, PubMed:22753929, PubMed:23818853). Binds ATP (By similarity). {ECO:0000250|UniProtKB:Q9C000,

Target Details

	ECO:0000269|PubMed:16429160, ECO:0000269|PubMed:19124602, ECO:0000269|PubMed:19651869, ECO:0000269|PubMed:19949100, ECO:0000269|PubMed:21170303, ECO:0000269|PubMed:22536155, ECO:0000269|PubMed:22753929, ECO:0000269|PubMed:23230290, ECO:0000269|PubMed:23818853, ECO:0000269|PubMed:24218483, ECO:0000269|PubMed:24492532, ECO:0000269|PubMed:24935976}.
Molecular Weight:	141.6 kDa Including tag.
UniProt:	Q2LKW6

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:	Protein has not been tested for activity yet. 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)

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