Datasheet for ABIN3130666

NLR Family, Pyrin Domain Containing 1B (NLRP1B) (AA 1-1177) protein (Strep Tag)

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Overview

Quantity:	250 µg
Target:	NLR Family, Pyrin Domain Containing 1B (NLRP1B)
Protein Characteristics:	AA 1-1177
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	Strep Tag
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MEESQYKQEH NKKVAQDEGQ EDKDTIFETI EAIEAKLMEL KTNPESTFNY GIFPEVYMNQ GEEILYPAWS LKEENLFQTF KSLRLFQKLC PRGSGNLVKK SWYPCVPEEG GHIINIQDLF GPNIGTQKEP QLVIIEGAAG IGKSTLARQV KRAWMEGELY RDHFQHVFFF SCRELAQCKK LSLAELITQG QDVPTAPINQ ILSHPEKLLF ILDGIDEPAW VLADQNPELC LYWSQTQPVH TLLGSLLGKS ILPEASFLLT TRTTALQKFI PSLPQSCQVE VLGFSDFEQE IYIYKYFAKQ IFGIKALMMV ESNPVLLTLC EVPWVCWLVC NCLKKQMEQG GDVSLTSQTT TAICLKYISL TIPVHHMRTQ LRALCSLAAE GIWKRRTLFS ESDLCKQGLD EDAVAIFLKT GVLQKQASSL SYSFAHLCLQ EFFASMSCIL EDSEERHGDM EMDRIVETLV ERYGRQNLFE APTVRFLFGL LSKEGLKEME KLFSCSLPGK TKLKLLWHIL GKSQPHQPPC LGLLHCLYEN QDMKLLTHVM HDLQGTIVPD TDDITHTVLQ TNVKHLVVRT DMELMVVTFC IQFCSHMRSL QLNMEGQQGY ALTAPRMVLY RWTPITNASW KILFYNLKFN SNLEGLDLSG NPLSYSAVQY LCDAMIYPGC

QLKTLWLVEC GLTPTYCSLL ASVLSACSSL RELDLQLNDL CDDGVRMLCE GLRNRACNLR ILRLDLYSLS AQVITELRTL EENNLKLHIS SIWMPQMMVP TENMDEEDIL TSFKQQRQQS GANPMEILGT EEDFWGPIGP VATEVVYRER NLYRVQLPMA GSYHCPSTRL HFVVTRAVTI EIEFCAWSQF LDKTPLQQSH MVVGPLFDIK AEQGAVTAVY LPHFVSLKDT KASTFDFKVA HFQEHGMVLE TPDRVKPGYT VLKNPSFSPM GVVLRIIPAA RHFIPITSIT LIYYRVNQEE VTLHLYLVPN DCTIQKAIDD EEMKFQFVRI NKPPPVDNLF IGSRYIVSGS ENLEITPKEL ELCYRSSKEF QLFSEIYVGN MGSEIKLQIK NKKHMKLIWE ALLKPGDLRP ALPRIAQALK DAPSLLHFMD QHREQLVARV TSVDPLLDKL HGLVLNEESY EAVRAENTNQ DKMRKLFNLS RSWSRACKDL FYQALKETHP HLVMDLLEKS GGVSLGS

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!

Product Details

	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:	NLR Family, Pyrin Domain Containing 1B (NLRP1B)
Alternative Name:	Nlrp1b (NLRP1B Products)
Background:	NACHT, LRR and PYD domains-containing protein 1b allele 2 (EC 3.4.-.-) [Cleaved into: NACHT, LRR and PYD domains-containing protein 1b, C-terminus (Nlrp1b1-CT), NACHT, LRR and PYD domains-containing protein 1b, N-terminus (Nlrp1b1-NT)],FUNCTION: Acts as the sensor component of the Nlrp1b inflammasome, which mediates inflammasome activation in response to various pathogen-associated signals, leading to subsequent pyroptosis (By similarity). Inflammasomes are supramolecular complexes that assemble in the cytosol in response to pathogens and other damage-associated signals and play critical roles in innate immunity and inflammation (By similarity). Acts as a recognition receptor (PRR): recognizes specific pathogens and other damage-associated signals: in response to pathogen-associated signals, the N-terminal part of Nlrp1b is degraded by the proteasome, releasing the cleaved C-terminal part of the protein (NACHT, LRR and PYD domains-containing protein 1b, C-terminus), which polymerizes to initiate the formation of the inflammasome complex: the inflammasome directly recruits pro-caspase-1 (proCASP1) independently of PYCARD/ASC and promotes caspase-1 (CASP1) activation, which subsequently cleaves and activates inflammatory cytokines IL1B and IL18 and gasdermin-D (GSDMD), leading to pyroptosis (By similarity). In the absence of GSDMD expression, the Nlrp1b inflammasome is able to recruit and activate CASP8, leading to activation of gasdermin-E (GSDME) (By similarity). Activation of Nlrp1b inflammasome is also required for HMGB1 secretion, the active cytokines and HMGB1 stimulate inflammatory responses (By similarity). Contrary to Nlrp1b allele 1, allele 2 is not activated by Bacillus anthracis lethal toxin (PubMed:16429160, PubMed:21170303, PubMed:24492532). {ECO:0000250|UniProtKB:Q2LKW6, ECO:0000269|PubMed:16429160,

Target Details

	ECO:0000269|PubMed:21170303, ECO:0000269|PubMed:24492532}., FUNCTION: [NACHT, LRR and PYD domains-containing protein 1b allele 2]: Constitutes the precursor of the Nlrp1b inflammasome, which mediates autoproteolytic processing within the FIIND domain to generate the N-terminal and C-terminal parts, which are associated non-covalently in absence of pathogens and other damage-associated signals. {ECO:0000250|UniProtKB:Q2LKW6}., FUNCTION: [NACHT, LRR and PYD domains-containing protein 1b, N-terminus]: Regulatory part that prevents formation of the Nlrp1b inflammasome: in absence of pathogens and other damage-associated signals, interacts with the C-terminal part of Nlrp1b (NACHT, LRR and PYD domains-containing protein 1b, C-terminus), preventing activation of the Nlrp1b inflammasome. In response to pathogen-associated signals, this part is ubiquitinated by the N-end rule pathway and degraded by the proteasome, releasing the cleaved C-terminal part of the protein, which polymerizes and forms the Nlrp1b inflammasome. {ECO:0000250|UniProtKB:Q2LKW6}., FUNCTION: [NACHT, LRR and PYD domains-containing protein 1b, C-terminus]: Constitutes the active part of the Nlrp1b inflammasome. In absence of pathogens and other damage-associated signals, interacts with the N-terminal part of Nlrp1b (NACHT, LRR and PYD domains-containing protein 1b, N-terminus), preventing activation of the Nlrp1b inflammasome. In response to pathogen-associated signals, the N-terminal part of Nlrp1b is degraded by the proteasome, releasing this form, which polymerizes to form the Nlrp1b inflammasome complex: the Nlrp1b inflammasome complex then directly recruits pro-caspase-1 (proCASP1) and promotes caspase-1 (CASP1) activation, leading to gasdermin-D (GSDMD) cleavage and subsequent pyroptosis. {ECO:0000250|UniProtKB:Q2LKW6}.
Molecular Weight:	134.2 kDa
UniProt:	A1Z198

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

Application Details

	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. 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