

Datasheet for ABIN3136591
NOD2 Protein (AA 1-1020) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	NOD2
Protein Characteristics:	AA 1-1020
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NOD2 protein is labelled with His tag.
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MRSSCCDMCS QEEFQAQRSQ LVALLISGSL EGFESILDWL LSWDVLSRED YEGLSLPGQP
 LSHSARRLLD TVWNKGVWGC QKLEAVQEA QANSHTFELY GSWDTHSLHP TRDLQSHRPA
 IVRRLYNHVE AMLELAREGG FLSQYECEEI RLPFTSSQR ARRLDLAAV KANGLAFL
 QHVRELPAPL PLPYEAAECQ KFISKLRTMV LTQSRFLSTY DGSENLCLD IYTENILELQ
 TEVGTAGALQ KSPAILGLED LFDTHGHLNR DADTILVVGE AGSGKSTLLQ RLHLLWATGR
 SFQEFLFIFP FSCRQLQCVK KPLSLRLLF EHCCWPDVAQ DDVFQFLLDH PDRVLLTFDG
 LDEFKFRFTD RERHCSPIDP TSVQTLFNL LQGNLLKNAC KVLTSRPDAV SALLRKVVRT
 ELQLKGFSEE GIQLYLRKHH REPGVADRLLI QLIQATSALH GLCHLPVFSW MVSRCHELL
 LQNRGFPTTS TDMYLLILQH FLLHASPPDS SPLGLGPGLL QSRLSTLLHL GHLALRGLAM
 SCYVFSAAQL QAAQVSDDI SLGFLVRAQS SVPGSKAPLE FLHITFCFF AAFYLAVSAD
 TSVASLKHLLF SCGRLGSSLL GRLLPNLCIQ GSRVKKGSEA ALLQKAEPHN LQITAAFLAG
 LLSQQHRDLL AACQVSERVL LQRQARARSC LAHSLREHFH SIPPVAVGET KSMHAMPGFI

WLIRSLYEMQ EEQLAQEAVR RLDIGHLKL FCRVGP AECA ALAFVLQHLQ RPVALQLDYN
SVGDVGVEQL RPCLGVCTAL YLRDNNISDR GARTLVECAL RCEQLQKLAL FNNKLT DACA
CSMAKLLAHK QNFLSLRVGN NHITAAGAEV LAQGLKSNTS LKFLGFWGNS VGDKGTQALA
EVVADHQNLK WLSLVGNNIG SMGAEALALM LEKNKSLEEL CLEENHICDE GVYSLAEGLK
RNSTLKFLKL SNNGITYRGA EALLQALSRN SAILEVWLRG NTFSLEEIQT LSSRDARLLL

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 Nod2 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 receipt 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.

Product Details

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:	NOD2
Alternative Name:	Nod2 (NOD2 Products)
Background:	Involved in gastrointestinal immunity. Upon stimulation by muramyl dipeptide (MDP), a fragment of bacterial peptidoglycan, binds the proximal adapter receptor-interacting RIPK2, which recruits ubiquitin ligases as XIAP, BIRC2, BIRC3 and the LUBAC complex, triggering activation of MAP kinases and activation of NF-kappa-B signaling. This in turn leads to the transcriptional activation of hundreds of genes involved in immune response (PubMed:22607974). Required for MDP-induced NLRP1-dependent CASP1 activation and IL1B release in macrophages (PubMed:18511561). {ECO:0000269 PubMed:18511561, ECO:0000269 PubMed:22607974}.
Molecular Weight:	114.5 kDa Including tag.
UniProt:	Q8K3Z0
Pathways:	Activation of Innate immune Response , Cellular Response to Molecule of Bacterial Origin , Regulation of Leukocyte Mediated Immunity , Positive Regulation of Immune Effector Process , Production of Molecular Mediator of Immune Response , Toll-Like Receptors Cascades , Inflammasome

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:	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.

Application Details

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