

Recombinant Human NLRC3 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50722

Size: 10ug, 100ug

Protein Name: NLR family CARD domain-containing protein 3 (CARD15-like protein)
(Caterpillar protein 16.2) (CLR16.2) (NACHT, LRR and CARD domains-containing protein 3)
(Nucleotide-binding oligomerization domain protein 3)

Synonym: NLRC3, NOD3

UniProt ID: Q7RTR2

UniProt Link: www.uniprot.org/uniprotkb/Q7RTR2/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1065 AA

Molecular Weight: 115 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MRKQEVRTGREAGQGHGTGSPAEQVKALMDLLAGKGSQGSQAPQALDRTPDAPLGPCSNDRIQ
RHRKALLSKVGGGPPELGGPWHRLASLLLVEGLTDLQLREHDFQVEATRGGGHPARTVALDRLFLP
LSRVSVPPRVSITIGVAGMGKTTLVRFVRLWAHGQVGKDFSLVLPLTFRDLNTHEKLCADRILCSVF
PHVGEPSLAVAVPARALLILDGLDECRTPLDFSNTVACTDPKKEIPVDHLITNIIRGNLFPEVSIWITSR
PSASGQIPGGLVDRMTEIRGFNEEEIKVCLEQMFPEQDALLGWMLSQVQADRALYLMCTVPAFCRL
TGMALGHLWRSRTGPQDAELWPPRTLCELYSWYFRMALSGEGQEKGKASPRIEQVAHGGRKMVG
TLGRLAFHGLLKKKYVFYEQDMKAFGVDLALLQGAPCSCFLQREETLASSVAYCFTHLSLQEFVAAA
YYYGASRRIFDLFTESGVSWPRLGFLTHFRSAAQRAMQAEDGRLDVFLRFLSGLLSPRVNALLAGS
LLAQGEHQAYRTQVAELLQGCLRPDAAVCARAINVLHCLHELQHTELARSVEEAMESGALARLTGP
AHRAALAYLLQVSDACAQEANLSLSLQGVLSLLPQLLYCRKLRLDTNQFQDPVMELLGSVLSGKD
CRIQKISLAENQISNKGAKALARSLLVNRSLSLDLRGNSIGPQGAKALADALKINRTLTSLSLQGNVT
RDDGARSMAEALASNRSLTSMHLQKNSIGPMGAQRMADALKQNRSLKELMFSSNSIGDGGAKALA
EALKVNQGLESLLDQSNISDAGVAALMGALCTNQTLTSLSLRENSISPEGAQAIAHALCANSTLKNL
DLTANLLHDQGARAIAVAVRENRTLTSHLQWNFIQAGAAQALGQALQLNRSLSLDLQENAIGDDG
ACAVARALKVNTALTALYLQVASIGASGAQVLGEALAVNRTLILDRLGNAIGVAGAKALANALKVNS
SLRRLNLQENSLGMDGAICIATALSGNHRLQHINLQGNHIGDSGARMISEAIKTNAPTCTVEM

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant NLR family CARD domain-containing protein 3 (CARD15-like protein) (Caterpillar protein 16.2) (CLR16.2) (NACHT, LRR and CARD domains-containing protein 3) (Nucleotide-binding oligomerization domain protein 3) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Negative regulator of the innate immune response (PubMed:15705585, PubMed:22863753, PubMed:25277106). Attenuates signaling pathways activated by Toll-like receptors (TLRs) and the DNA sensor STING/TMEM173 in response to pathogen-associated molecular patterns, such as intracellular poly(dA:dT), but not poly(I:C), or in response to DNA virus infection, including that of Herpes simplex virus 1 (HSV1) (By similarity) (PubMed:22863753). May affect TLR4 signaling by acting at the level of TRAF6 ubiquitination, decreasing the activating 'Lys-63'-linked ubiquitination and leaving unchanged the degradative 'Lys-48'-linked ubiquitination (PubMed:22863753). Inhibits the PI3K-AKT-mTOR pathway possibly by directly interacting with the phosphatidylinositol 3-kinase regulatory subunit p85 (PIK3R1/PIK3R2) and disrupting the association between PIK3R1/PIK3R2 and the catalytic subunit p110 (PIK3CA/PIK3CB/PIK3CD) and reducing PIK3R1/PIK3R2 activation. Via its regulation of the PI3K-AKT-mTOR pathway, controls cell proliferation, predominantly in intestinal epithelial cells (By similarity). May also affect NOD1- or NOD2-mediated NF-kappa-B activation (PubMed:25277106). Might also affect the inflammatory response by preventing NLRP3 inflammasome formation, CASP1 cleavage and IL1B maturation (PubMed:25277106).

Subcellular Localization: Cytoplasm .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.