

Product datasheet for **RC226287**

NLRP3 (NM_001127462) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NLRP3 (NM_001127462) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NLRP3
Synonyms:	AGTAVPRL; AII; AVP; C1orf7; CIAS1; CLR1.1; DFNA34; FCAS; FCAS1; FCU; KEFH; MWS; NALP3; PYPAF1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC226287 representing NM_001127462
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAAGATGGCAAGCACCCGCTGCAAGCTGGCCAGGTACCTGGAGACCTGGAGGATGTGGACTTGAAGA
 AATTTAAGATGCACTTAGAGGACTATCCTCCCAAGAGGCTGCATCCCCCTCCGAGGGTTCAGACAGA
 GAAGGCAGACCATGTGGATCTAGCCACGCTAATGATCGACTTCAATGGGAGGAGAGGCGTGGCCATG
 GCCGTGTGGATCTTCGCTGCGATCAACAGGAGAGACCTTTATGAGAAAGCAAAAAGAGATGAGCCGAAGT
 GGGGTTTCAGATAATGCACGTGTTTCAATCCCCTGTGATATGCCAGGAAGACAGCATTGAAGAGGAGTG
 GATGGGTTTACTGGAGTACCTTTGAGAATCTCTATTTGAAAAATGAAGAAAGATTACCGTAAGAAGTAC
 AGAAAGTACGTGAGAAGCAGATTCCAGTGCATTGAAGACAGGAATGCCCGTCTGGGTGAGAGTGTGAGCC
 TCAACAAACGCTACACACGACTGCGTCTCATCAAGGAGCACCGGAGCCAGCAGGAGAGGGAGCAGGAGCT
 TCTGGCCATCGGCAAGACCAAGACGTGTGAGAGCCCCGTGAGTCCCATTAAGATGGAGTTGCTGTTTAC
 CCCGATGATGAGCATTCTGAGCCTGTGCACACCGTGGTGTCCAGGGGGCGGCAGGGATTGGGAAAAACA
 TCTGGCCAGGAAGATGATGTTGGACTGGGCGTCGGGGACACTCTACCAAGACAGTTTACTATCTGTT
 CTATATCCACTGTCCGGAGGTGAGCCTTGTGACACAGAGGAGCCTGGGGACCTGATCATGAGCTGCTGC
 CCCGACCAAAACCCACCCATCCACAAGATCGTGAGAAAACCTCCAGAATCCTCTTCCATGGACGGCT
 TCGATGAGCTGCAAGGTGCCTTTGACGAGCACATAGGACCGCTCTGCACTGACTGGCAGAAGGCCGAGCG
 GGGAGACATTCTCTGAGCAGCCTCATCAGAAAGAAGCTGCTTCCGAGGCCTCTCTGCTCATCACCAGC
 AGACCTGTGGCCCTGGAGAACTGCAGCAGCTTCTGAGCAGCCTGCTGAGCAGCCTGAGGAGTGGGTTTCT
 CCGAGGCCAAAAGGAAAGAGTACTTCTTCAAGTACTTCTGATGAGGCCCAAGCCAGGGCAGGCTTCAG
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 GGACTGAAAACAGCAGATGGAGAGTGGAAGAGCCTTGCCAGACATCCAAGACCACCACCGCGTGTACG
 TCTTCTTCTTCCAGTTTGTGCGACGCCCGGGGAGGGAGCCAGGAGCACGGCCTCTGCGCCACCTCTG
 GGGGCTGCTCTTTGGCTGCAGATGGAATCTGGAACAGAAAATCCTGTTTGGAGAGTCCGACCTCAGG
 AATCATGGACTGCAGAAGGCGGATGTGTCTGCTTCTGAGGATGAACCTGTTCCAAAAGGAAGTGGACT
 GCGAGAAGTTCTACAGCTTCCATCCATGACTTCCAGGAGTTCTTGGCCCATGTACTACCTGCTGGA
 AGAGGAAAAGGAAGGAGGACGAACGTTCCAGGGAGTCGTTTGAAGCTTCCAGCCGAGAGCTGACAGTC
 CTTCTGAAAACTATGGCAAATTCGAAAAGGGTATTTGATTTTTGTTGTACGTTTCTCTTTGGCCTGG
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 GCTGCTGAAATGGATTGAAGTGAAGGCAAGCTAAAAAGCTGCAGATCCAGCCAGCCAGCTGGAATTG
 TTCTACTGTTTGTACGAGATGCAGGAGGAGGACTTCGTGCAAAGGGCCATGGACTATTTCCCAAGATTG
 AGATCAATCTCTCCACCAAGATGGACCACATGGTTTCTCCTTTTGCATTGAGAACTGTCATCGGGTGA
 GTCAGTGTCCCTGGGTTTCTCCATAACATGCCAAGGAGGAAGAGGAGGAGGAAAAGGAAGGCCGACAC
 CTTGATATGGTGCAGTGTGCTCCCAAGCTCCTCTCATGCTGCCTGTTCTATGGGTGGGGCGCTGTG
 GCCTCTCGCATGAGTGTGCTTTCGACATCTCCTGGTCTCAGCAGCAACCAGAAGCTGGTGGAGCTGGA
 CCTGAGTGACAACGCCCTCGGTGACTTCGGAATCAGACTTCTGTGTGGGACTGAAGCACCTGTTGTGC
 AATCTGAAGAAGCTCTGTTGGTTCAGTGTGCTGCATCAGCATGTTGTGAGGATCTTGATCATGATAT
 TGAGCACCAAGCCATTCCCTGACCAGACTCTATGTGGGGGAGAATGCCCTGGGAGACTCAGGAGTCGCAAT
 TTTATGTGAAAAAGCCAAGAATCCACAGTGAACCTGCAGAACTGGGTTGGTGAATTCTGGCCTTACG
 TCAGTCTGTTGTTGAGCTTTGCTCCTCGGTACTCAGCACTAATCAGAATCTCACGCACCTTACCTGCGAG
 GCAACACTCTCGGAGACAAGGGGATCAAACACTCTGTGAGGGACTTTGCACCCCGACTGCAAGCTTCA
 GGTGTTGGAATTAGACAAGTGAACCTCACGTACACTGCTGCTGGGATCTTCCACACTCTGACCTCC
 AGCCAGAGCCTGCGAAAGCTGAGCCTGGCAACAATGACCTGGGCGACCTGGGGTTCATGATGTTCTGTG
 AAGTGTGAAACAGCAGAGCTGCCTCCTGCAGAACCTGGGTTGTCTGAAATGTATTTCAATTATGAGAC
 AAAAAGTGCCTTAGAAACACTTCAAGAAGAAAAGCCTGAGCTGACCGTCTCTTTGAGCCTTCTGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC226287 representing NM_001127462
 Red=Cloning site Green=Tags(s)

MKMASTRCKLARYLEDLEDVDLKKFKMHLEDYPPQKGC IPLPRGQTEKADHVDLATLMIDFNGEKAWAM
 AVWIFAANRRDLYEKAKRDEPKWGS DNARVSNPTVICQEDSIEEEWMLLEYLSRISICKMKKDYRKKY
 RKYVRSRFQCIEDRNARLGESVSLNKRYTRLRLIKEHRSQQEREQELLAIGKTKTCESPVSPKIMELLFD
 PDDEHSEPVHTVVVFQGAAGIGKTLARKMMLDWASGTL YQDRFDYLFYIHCREVSLVTQRSLGDLIMSSC
 PDPNPPIHKIVRKPSRILFLMDGFDELQGA FDEHIGPLCTDWQKAERGDILLSSLIRKKLLPEASLLITT
 RPVALEKLQHLLDHPRHVEILGFSEAKRKEYFFKYFSDEAQAARAAFSLIQENEVLFTMCFIPLVCWIVCT
 GLKQQMESGKSLAQTSKTTTAVYVFFLSLLQPRGGSQEHLCAHLWGLCSLAADGIWNQKILFEESDLR
 NHGLQKADVSAFLRMNLFQKEVDCEKFYSFIHMTFQEFAAMYLL EEEKEGR TNVPGSRLKLP SRDVTV
 LLENYGFKEKGYLIFVVRFLFGLVNQERTSYLEKKLSCKISQQIRLELLKWI EVKAKAKKLIQPSQLEL
 FYCLYEMQEEDFVQRAMDYFPKIEINLSTRMDHMVSSFCIENCHRVESLSL GFLHNMPKEEEEEKEGRH
 LDMVQCVL PSSSHAACSHGLGRCGLSHECCFDISLVLSSNQKLV ELDLSDNALGDFGIRLLCVGLKHLCC
 NLKKLWLVSCCLTSACCDLASVLSHSLTRLVYGENALGDSGVA ILC EAKNPQC NLQKLG LVNSGLT
 SVCCSALSSVLS TNQNLTHLYLRGNTLGDKGIKLLCEGLLHPDCKLQVLELDN CNLTS HCWDLSTLLTS
 SQSLRKL SLGNNDL GDLGVMMFCEVLKQQSCLLQNLGLSEMYFN YETKSALETLQEEKPELTVVFEPSW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja2555_b04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001127462

ORF Size: 2937 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001127462.2](#), [NP_001120934.1](#)

RefSeq Size: 4299 bp

RefSeq ORF: 2934 bp

Locus ID: 114548

UniProt ID: [Q96P20](#)

Cytogenetics: 1q44

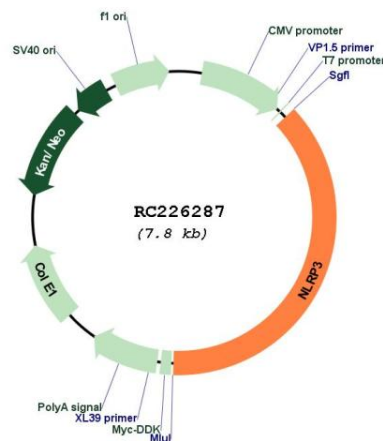
Protein Families: Druggable Genome

Protein Pathways: NOD-like receptor signaling pathway

MW: 112.3 kDa

Gene Summary:

This gene encodes a pyrin-like protein containing a pyrin domain, a nucleotide-binding site (NBS) domain, and a leucine-rich repeat (LRR) motif. This protein interacts with the apoptosis-associated speck-like protein PYCARD/ASC, which contains a caspase recruitment domain, and is a member of the NLRP3 inflammasome complex. This complex functions as an upstream activator of NF-kappaB signaling, and it plays a role in the regulation of inflammation, the immune response, and apoptosis. The SARS-CoV 3a protein, a transmembrane pore-forming viroporin, has been shown to activate the NLRP3 inflammasome via the formation of ion channels in macrophages. Mutations in this gene are associated with familial cold autoinflammatory syndrome (FCAS), Muckle-Wells syndrome (MWS), chronic infantile neurological cutaneous and articular (CINCA) syndrome, neonatal-onset multisystem inflammatory disease (NOMID), keratoendotheliitis fugax hereditaria, and deafness, autosomal dominant 34, with or without inflammation. Multiple alternatively spliced transcript variants encoding distinct isoforms have been identified for this gene. Alternative 5' UTR structures are suggested by available data; however, insufficient evidence is available to determine if all of the represented 5' UTR splice patterns are biologically valid. [provided by RefSeq, Aug 2020]

Product images:


Circular map for RC226287