

## Product datasheet for **SC323242**

### NLRP3 (NM\_001127462) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NLRP3 (NM_001127462) Human Untagged Clone
Tag:	Tag Free
Symbol:	NLRP3
Synonyms:	AGTAVPRL; All; AVP; C1orf7; CIAS1; CLR1.1; DFNA34; FCAS; FCAS1; FCU; KEFH; MWS; NALP3; PYPAF1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF sequence for NM_001127462 edited

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TGCCGTGTTCACTGCCTGGTATCTTAGTGTGGACCGAAGCCTAAGGACCCTGAAAACAGC
TGCAGATGAAGATGGCAAGCACCCGCTGCAAGCTGGCCAGGTACCTGGAGGACCTGGAGG
ATGTGGACTTGAAGAAATTTAAGATGCACTTAGAGGACTATCCTCCCCAGAAGGGCTGCA
TCCCCCTCCCGAGGGGTGAGCAGAGAGAAGGCAGACCATGTGGATCTAGCCACGCTAATGA
TCGACTTCAATGGGGAGGAGAAGGCGTGGGCCATGGCCGTGTGGATCTTCGCTGCGATCA
ACAGGAGAGACCTTTATGAGAAAGCAAAAAGAGATGAGCCGAAGTGGGGTTTCAGATAATG
CACGTGTTTTCGAATCCCCTGTGATATGCCAGGAAGACAGCATTGAAGAGGAGTGGATGG
GTTTACTGGAGTACCTTTCGAGAATCTCTATTTGTAATAAAGAAAGATTACCGTAAGA
AGTACAGAAAGTACGTGAGAAGCAGATTCCAGTGCATTGAAGACAGGAATGCCCGTCTGG
GTGAGAGTGTGAGCCTCAACAAACGCTACACACGACTGCGTCTCATCAAGGAGCACCGGA
GCCAGCAGGAGAGGGAGCAGGAGCTTCTGGCCATCGGCAAGACCAAGACGTGTGAGAGCC
CCGTGAGTCCCATTAAGATGGAGTTGCTGTTTGACCCCGATGATGAGCATTCTGAGCCTG
TGCACACTGTGGTGTCCAGGGGCGGCAGGGATTGGGAAAACAATCCTGGCCAGGAAGA
TGATGTTGGACTGGGCGTCGGGGACACTCTACCAAGACAGGTTTACTATCTGTTCTATA
TCCACTGTCCGGAGGTGAGCCTTGTGACACAGAGGAGCCTGGGGGACCTGATCATGAGCT
GCTGCCCGACCCAAACCCACCCATCCACAAGATCGTGAGAAAACCCCTCCAGAATCCTCT
TCCTCATGGACGGCTTCGATGAGCTGCAAGGTGCCTTTGACGAGCACATAGGACCCTCT
GCACTGACTGGCAGAAGGCCGAGCGGGGAGACATTCTCCTGAGCAGCCTCATCAGAAAGA
AGCTGCTTCCCGAGGCCCTCTGCTCATACCACGAGACCTGTGGCCCTGGAGAAACTGC
AGCACTTGCTGGACCCTCGGCATGTGGAGATCCTGGGTTTCTCCGAGGCCAAAAGGA
AAGAGTACTTCTTCAAGTACTTCTCTGATGAGGCCCAAGCCAGGGCAGCCTTCAGTCTGA
TTCAGGAGAACGAGGTCCTCTTACCATGTGCTTCATCCCCCTGGTCTGCTGGATCGTGT
GCACTGGACTGAAAACAGCAGATGGAGAGTGGCAAGAGCCTTGCCAGACATCCAAGACCA
CCACCGCGGTGTACGTCTTCTTCTTCCAGTTTGTGTCAGCCCCGGGGAGGGAGCCAGG
AGCACGGCCTCTGCGCCACCTCTGGGGCTCTGCTCTTTGGCTGCAGATGGAATCTGGA

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ACCAGAAAATCCTGTTTGAGGAGTCCGACCTCAGGAATCATGGACTGCAGAAGGCGGATG
TGTCTGCTTTCCTGAGGATGAACCTGTTCCAAAAGGAAGTGGACTGCGAGAAGTTCTACA
GCTTCATCCACATGACTTTCAGGAGTTCTTTGCCGCCATGTAACCTGCTGGAAGAGG
AAAAGGAAGGAAGGACGAACGTTCCAGGGAGTCGTTTGAAGCTTCCCAGCCGAGACGTGA
CAGTCCTTCTGGAAAATATGGCAAATTCGAAAAGGGTATTTGATTTTTGTTGTACGTT
TCCTCTTTGGCCTGGTAAACCAGGAGAGGACCTCCTACTTGGAGAAGAAATTAAGTTGCA
AGATCTCAGCAAATCAGGCTGGAGCTGCTGAAATGGATTGAAGTGAAGCCAAAAGCTA
AAAAGCTGCAGATCCAGCCAGCCAGCTGGAATTGTTCTACTGTTTGTACGAGATGCAGG
AGGAGGACTTCGTGCAAAGGGCCATGGACTATTTCCCAAGATTGAGATCAATCTCTCCA
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TGTCCCTGGGGTTTCTCCATAACATGCCAAGGAGGAAGAGGAGGAAAAGGAAGGCC
GACACCTTGATATGGTGCAGTGTGCTCCTCCAAGCTCCTCTCATGCTGCCTGTTCTCATG
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GCAACCAGAAGCTGGTGGAGCTGGACCTGAGTGACAACGCCCTCGGTGACTTCGGAATCA
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TCTTGCACCCGACTGCAAGCTTTCAGGTGTTGGAATTAGACAACCTGCAACCTCACGTCA
ACTGCTGCTGGGATCTTCCACACTTCTGACCTCCAGCCAGAGCCTGCGAAAAGCTGAGCC
TGGGCAACAATGACCTGGGCGACCTGGGGTTCATGATGTTCTGTGAAGTGTGAAACAGC
AGAGCTGCCTCCTGCAGAACCTGGGGTTGCTGAAATGTATTTCAATTATGAGACAAAAA
GTGCGTTAGAAACAATCAAGAAGAAAAGCCTGAGCTGACCGTCTCTTTGAGCCTTCTT
GGTAGGAGTGGAAACGGGGCTGCCAGACGCCAGTGTCTCCGGTCCCTCCAGCTGGGGGG
CCTCAGGTGGAGAGAGCTGCGATCCATCCAGGCCAA
    
```

**Restriction Sites:**

Please inquire

**ACCN:**

NM\_001127462

**Insert Size:**

4299 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](mailto: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:**

The ORF of this clone has been fully sequenced and found to be a perfect match to NM\_001127462.1.

**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\\_001127462.1](#), [NP\\_001120934.1](#)

**RefSeq Size:** 4299 bp

**RefSeq ORF:** 4299 bp

**Locus ID:** 114548

**UniProt ID:** [Q96P20](#)

**Cytogenetics:** 1q44

**Protein Families:** Druggable Genome

**Protein Pathways:** NOD-like receptor signaling pathway

**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]

Transcript Variant: This variant (5) lacks an alternate in-frame exon in the mid-coding region, compared to variant 1. The encoded isoform (d) is shorter than isoform a. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments. CCDS Note: This CCDS representation uses the 5'-most in-frame start codon, which is conserved in primates, rat, kangaroo rat, dolphin, cow, cat, elephant, tenrec and armadillo. An alternative downstream start codon, which is more widely conserved and has a stronger Kozak signal, also exists. It is possible that leaky scanning by ribosomes would allow the downstream start codon to be used, at least some of the time. The use of the downstream start codon would result in a protein that is 2 aa shorter at the N-terminus. There is no experimental evidence showing which start codon is preferentially used in vivo.