

## Product datasheet for RC220952

### NLRP3 (NM\_004895) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NLRP3 (NM_004895) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NLRP3
Synonyms:	AGTAVPRL; All; 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)
ORF Nucleotide Sequence:	>RC220952 representing NM_004895 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
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ATGAAGATGGCAAGCACCCGCTGCAAGCTGGCCAGGTACCTGGAGGACCTGGAGGATGTGGACTTGAAGA  
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GGGTTTCAGATAATGCACGTGTTTCGAATCCCCTGTGATATGCCAGGAAGACAGCATTGAAGAGGAGTG  
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GGGGCTGCTCTTTGGCTGCAGATGGAATCTGGAACCAGAAAATCCTGTTTGAGGAGTCCGACCTCAGG  
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ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC220952 representing NM\_004895

Red=Cloning site Green=Tags(s)

MKMASTRCKLARYLEDLEDVDLKKFKMHLEDYPPQKGCIPRPGQTEKADHVDLTLMDFNNGEEKAWAM  
AVWIFAAINRRDLYEKAKRDEPKWGSNARVSNPTVICQEDSIEEEWMGLLEYLSRISICKMKKDYRKY  
RKYVRSRFQCIEDRNARLGEVSLNKRYTRLRIKEHRSQQEREQELLAIGKTKTCESPVSPKMELLFD  
PDDEHSEPVHTVVFQGAAGIGKTLARKMMLDWSGTLYQDRFDYLFYIHCREVSLVTQRSLGDLIMSSC  
PDPNPPIHKIVRKPSRILFLMDGFDELQGAFFDEHIGPLCTDWQKAERGDILLSSLIRKLLPEASLLITT  
RPVALEKQLHLLDHPRHVEILGFSEAKRKEYFFKYFSDEAQAARAAFSLIQENEVLFMCFIPLVCWIVCT  
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FYCLYEMQEEDFVQRAMDYFPKIEINLSTRMDHMVSSFCIENCHRVESSLGFLHNMPKEEEEEKEGRH  
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NQNLTHLYLRGNTLGDKGIKLLCEGLLHPDCKLQVLELDNCNLTSHCWDLSTLLTSSQSLRKLKSLGNN  
LGDLGVMMFCEVLKQQSCLLQNLGLSEMYFNYETKSAETLQEEKPELTVVFEPWS

TRTRPLEQKLISEEDLAANDILDYKDDDDKVV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6168\\_f11.zip](https://cdn.origene.com/chromatograms/mk6168_f11.zip)

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_004895

**ORF Size:** 3108 bp

**OTI Disclaimer:** 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_004895.5](#)

**RefSeq Size:** 4484 bp

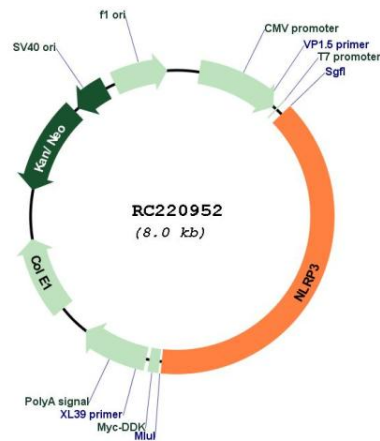
**RefSeq ORF:** 3111 bp

**Locus ID:** 114548

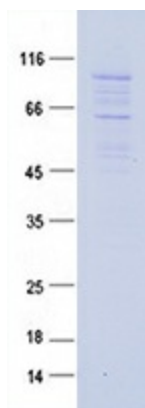
**UniProt ID:** [Q96P20](#)  
**Cytogenetics:** 1q44  
**Domains:** LRR, LRR\_RI, PAAD\_DAPIN  
**Protein Families:** Druggable Genome  
**Protein Pathways:** NOD-like receptor signaling pathway  
**MW:** 118 kDa

**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]

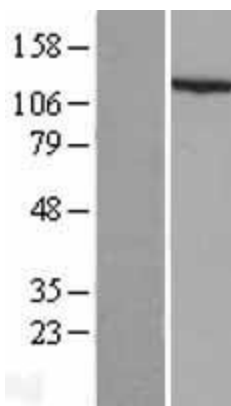
### Product images:



Circular map for RC220952



Coomassie blue staining of purified NLRP3 protein (Cat# [TP320952]). The protein was produced from HEK293T cells transfected with NLRP3 cDNA clone (Cat# RC220952) using MegaTran 2.0 (Cat# [TT210002]).



Western blot validation of overexpression lysate (Cat# [LY401526]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220952 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).