

Product datasheet for **RR217429**

Nlrp3 (NM_001191642) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Nlrp3 (NM_001191642) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Nlrp3
Synonyms: Cias1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR217429 representing NM_001191642
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAGATGATGAGTGTTTCGCTGCAAGCTGGCCAGTATCTAGAGGACCTGGAAGATGTGGACCTCAAGA
AATTTAAAATGCATTTGGAAGATTACCCACCCGAGAAAGGCTGTGTTCCGATCCCCAGGGCCAGATGGA
GAAGGCAGATCACTTGGATCTAGCCACACTCATGATTGACTTCAATGGGGAGGAGAAGGCGTGGGGCATG
GCTGTGTGGATCTTTCAGCGATCAACAGGCGAGACCTCTGGGAAAAAGCTAAGAAGGACCAGCCAGAGT
GGAATGATGCATGCACGTCTAATCTCTCCATGGTGTGCCAGGAAGACAGCCTTGAAGAGGAGTGGATAGG
TTTGCTGGGATATCTCTCCCGCATCTCGATTTGTAAAAAAGAAAGATTACTGTAAGATATACAGAAGG
CATGTGAGAAGCAGGTTCTACTCCATCAAAGACAGGAATGCACGTCTAGGTGAGAGCGTGGACCTCAACA
GACGCTACACCCAGCTCCAACCTGGTCAAGGAGCATCCAAGCAAGCAGGAAAGGGAGCATGAACTCTTGAC
CATTGGCAGGACTAAGATGTGGGACAGGCCATGAGCTCCCTTAAGCTGGAGCTGCTCTTTGAGCCTGAG
GATGAACACTTGGAGCCCGTGCACACAGTGGTGTCCAGGGAGCAGCAGGCATCGGAAAAACAATCCTAG
CCAGGAAGATTATGTTGGACTGGCCCTTGGGGAAGCTCTCAAAGACAAATTTGATTATTTGTTCTTTAT
CCACTGTCGAGAGGTGAGCCTCAGGGCACAAAGAGCCTAGCAGATCTCATTATCAGCTGCTGGCCTGAC
CCAAACCCACCAGTCTGCAAGATCCTGTGCAAGCCTTCCAGGATCCTCTTCTCATGGACGGCTTTGATG
AGCTGCAGGGGGCCTTTGATGAGCACATCGAGGAGGTCTGCACAGACTGGCAGAAGGCTGTGAGGGGAGA
CATTCTGCTAAGCAGCCTCATCCGAAAGAAGTTGCTGCCAAGGCCTCTCTGCTTATTACGACGAGGCCA
GTAGCCTTGGAGAAGCTGCAGCATCTCCTGGACCACCCCGCCACGTGGAGATCCTAGGTTTCTCTGAGG
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CTGTTTATTGGCTGCGGATGGAATTTGGAACCAGAAGATCCTATTTGAAGAGTGTGATCTGCGGAAACAC
GGCCTGCAGAAGACCGACGTCTCTGCTTCTGAGAATGAACGTGTTCCAGAAGGAGGTGGACTGCGAGA



GATTTTACAGCTTCAGCCACATGACTTTCCAGGAGTTCTTTGCGGCTATGTACTATCTGCTAGAAGAGGA
 GGAAGAGGGGGTGACCGTGAGGAAGGGACCAGAAGGCTGTTTACAGACCTTCTGAACCGAGACGTGAAGGTC
 CTATTAGAAAATTACGGCAAGTTCGAAAAAGGCTATCTGATTTTTGTTGTACGCTTCCTCTTTGGCCTTG
 TAAACCAGGAGAGAACTTCTATTTGGAGAAGAAGCTAAGTTGCAAGATCTCTCAGCAAGTCAGACTGGA
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 TCACCTCTAGCTTCTGCCGAGGTCTCTTCTCAAGTCTCAGCACCAACCAGAGCCTCACTGAAGTGGACCT
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 CAGAACCTCACACACCTGTACCTACGAAGCAATGCCCTTGGAGACATGGGACTCAAGCTCCTCTGTGAGG
 GACTTCTGCACCCCGACTGTAAGCTACAGATGCTGGAGTTAGACAACCTGCAGCCTCACCTCACACTCCTG
 CTGGGATCTCTCCACAATTCTGACCATAACCAGAGCCTCCGGAAGCTGAACTTGAGCAACAACGACCTG
 GGCGATCTGTGTGGTGAAGCTCTGTGAGGTTCTGAAACAGCAGGGCTGCCTCCTGCAGAGCCTACAGT
 TGGGTGAATGTATTTAAATTGTGAAACAAAACGTACCTAGAAGCTCTCCAGGAGGAAAAGCCTGAGCT
 GACTGTTGTTTTGAGATTTCTTG

ACGCGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR217429 representing NM_001191642
 Red=Cloning site Green=Tags(s)

MKMSVRCKLAQYLEDLEDVLDLKKFKMHLEDYPPKEKCVPIPRGQMEKADHLDLATLMIDFNGEKAWGM
 AVWIFAATNRRDLWEKAKKDQPEWDACTSNLSMVCQEDSLEEWEIGLLGYLSRISICKKKKDYCKIYRR
 HVRSRFYSIKDRNARLGESVDLNRRTYQLQLVKEHPSKQEREHELLTIGRTKMWDPRMSSLKLELLFEPE
 DEHLEPVHTVVFQGAAGIGKTI LARKIMLDWALGKLFKDKFDYLFHICREVSRLRAPKSLADLIISWPD
 PNPPVCKILCKPSRILFLMDGFDELQGAFFDEHIEEVCTDWQKAVRGDILLSSLIRKLLPKASLLITTRP
 VALEKQLHLLDHPHVEILGFSEAKRKEYFFKYFSNELQAREAFRLIQENEILFTMCFIPLVCWIVCTGL
 KQQMETGKSLAQTSKTTTAVYVFFLSLLQSRGGIEEHLFSAYLPGLCSLAADGIWNQKILFEEDLRKH
 GLQKTDVSAFLRMNVFQKEVD CERFYFSHMTFQEFFAAMYLL EEEEEGVTVRKGPEGCSDLLNRDVKV
 LLENYGFEEKGYLIFVVRFLFGLVNQERTSYLEKKLSCKISQQRLELLKWIEVKAKAKKLQRQPSQLEL
 FYCLYEMQEEDFVQSAMGHFPKIEINLSTRMDHVVSFCIKNCHRVKTL SLGFLHNSPKEEEEERKGSQP
 LDQVQCVFPDPHVACSSRLVNCCLTSSFCRGLFSSLSTNQSLTELDLSDNTLGDPMRVLCEALQHPGCN
 IQRLWLGRCGLTHQCCFNISVLSSSQKLVLDLSDNALGDFGVRLLCVGLKHLKHLKQLWLVSCCLTS
 ACCQDLALVLSNHSLTRLYIGENALGDSGVQVLCCKMKDPQCNLQKGLVNSGLTSLCCSALTSVLKTN
 QNLTHLYLRSNALGDMGLKLLCEGLLHPDCKLQMLELDNCSLTSWSCWDLSTILTHNQSLRKLNLNNNDL
 GDL CVVTLCEVLKQQGCLLQSLQLGEMYLNCETKRTLEALQEEKPELTVVFEISW

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

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:	<ol style="list-style-type: none">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_001191642.1 , NP_001178571.1
RefSeq Size:	3857 bp
RefSeq ORF:	3108 bp
Locus ID:	287362
UniProt ID:	D4A523
Cytogenetics:	10q22
MW:	118.5 kDa
Gene Summary:	<p>As the sensor component of the NLRP3 inflammasome, plays a crucial role in innate immunity and inflammation. In response to pathogens and other damage-associated signals, initiates the formation of the inflammasome polymeric complex, made of NLRP3, PYCARD and CASP1 (or possibly CASP4/CASP11). Recruitment of proCASP1 to the inflammasome promotes its activation and CASP1-catalyzed IL1B and IL18 maturation and secretion in the extracellular milieu. Activation of NLRP3 inflammasome is also required for HMGB1 secretion (By similarity). The active cytokines and HMGB1 stimulate inflammatory responses. Inflammasomes can also induce pyroptosis, an inflammatory form of programmed cell death. Under resting conditions, NLRP3 is autoinhibited. NLRP3 activation stimuli include extracellular ATP, reactive oxygen species, K(+) efflux, crystals of monosodium urate or cholesterol, amyloid-beta fibers, environmental or industrial particles and nanoparticles, cytosolic dsRNA, etc. However, it is unclear what constitutes the direct NLRP3 activator. Activation in presence of cytosolic dsRNA is mediated by DHX33 (By similarity). Independently of inflammasome activation, regulates the differentiation of T helper 2 (Th2) cells and has a role in Th2 cell-dependent asthma and tumor growth. During Th2 differentiation, required for optimal IRF4 binding to IL4 promoter and for IRF4-dependent IL4 transcription. Binds to the consensus DNA sequence 5'-GRRGGNRGAG-3'. May also participate in the transcription of IL5, IL13, GATA3, CCR3, CCR4 and MAF (By similarity).[UniProtKB/Swiss-Prot Function]</p>