

Product datasheet for **MC223844**

Nlrp1b (NM_001162414) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nlrp1b (NM_001162414) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Nlrp1b
Synonyms:	ENSMUSG00000070390; Nalp1b; OTTMUSG00000006087; OTTMUSG00000006089
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC223844 representing NM_001162414 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGAATCTCAGTACAAGCAGGAACATAACAAAAAGGTAGCTCAGGATGAAGGTCAAGAGGACAAGG
ACACCATCTTCGAAACAATAGAAGCTATAGAGGCAAAGCTGATGGAGCTCAAACCAACCCAGAGAGTAC
CTTCAATTATGGAATATTTCCAGAAGTATATGAATCAGGGAGAAGAGATACTTTACCCAGCATGGTCA
TTGAAAGAGGAGAATTTGTTTCAAACCTTTCAAAGTCTACGACTGTTTAAAAATTGTGCCCAAGAGGCT
CAGGGAACCTTGGTCAAGAAAAGCTGGTATCCATGTGTACCAGAAGAAGGAGGACATATAATTAATATCCA
AGACTTATTTGGCCCAAATATAGGTACTCAGAAAGAGCCTCAATTAGTCATAATAGAAGGGGCTGCTGGG
ATTGGGAAGTCAACACTGGCCAGGCAGGTGAAGAGAGCCTGGATGGAAGGCGAGCTCTACAGGGATCACT
TCCAACATGTCTTCTTTCAGCTGCAGAGAGCTGGCCAGTGCAAGAAGCTGAGTCTGGCTGAGCTCAT
AACACAAGGCCAGGATGTGCCACAGCTCCCATAAATCAGATCCTGTCTCACCTGAGAAGCTGCTCTTC
ATCCTGGATGGCATAGATGAGCCAGCATGGGTCTTGGCAGACCAGAATCCTGAGCTATGTCTGTACTGGA
GTCAAACACAGCCTGTGCACACACTACTGGGAAGTTTACTAGGGAATCCATCCTTCTGAGGCTTCCTT
CTTGCTCACAACCTGCACACAGCTCTACAGAAGTTCATTCTTCTTTGCCACAGTCATGTCAGGTGGAA
GTCCTAGGATTCAGTGATTTTGAACAGGAGATCTATATCTACAAATATTTGCAAAGCAAATATTTGGAA
TTAAAGCTCTTATGATGGTTGAGTCTAACCCAGTTCTCCTGACCTGTGTGAGGTTCCCTGGGTGTGCTG
GTTGGTCTGCAATTGCCTGAAAAAGCAGATGGAGCAGGGTGGAGATGTCTCCCTGACCTCACAGACAACC
ACAGCCATCTGCCTAAAATACATTTCCCTAACAAATCCCAGTGCATCATATGAGGACCCAGCTCAGAGCCC
TCTGCTCATTGGCTGCTGAAGGCATCTGGAAAAGAAGGACCTGTTCAAGTAAAGCGACCTCTGTAAGCA
AGGGTTAGACGAGGATGCCGTTGCCATTTTCTGAAGACTGGTGTCTTCAAAGCAGGCCAGCTCTCTG
AGCTATAGCTTTGCCACTTGTGTCTCCAGGAGTTCTTTGCATCAATGTCTTGCATCTTGGAGGATAGTG
AGGAACGACATGGTGATATGGAAATGGACAGAATTGTGGAACACTGGTAGAACGGTATGGAAGACAAAA
CCTGTTTGAGGCACCCACTGTGCGCTTCTCTTTGGTCTTTTGTAGTAAAGAGGGATTGAAAGAAATGGAA



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AAGCTCTTTTCCTGCAGCCTTCCTGGGAAGACAAAGTTGAACTACTATGGCACATCCTTGGGAAATCCC
AACCCCATCAACCACCTTGCCTGGGTTTGCTCCACTGTCTATATGAAAATCAGGATATGAAGCTCCTGAC
ACATGTGATGCATGATCTTCAAGGAACAATAGTGCCTGACACAGATGACATTACACACACAGTGTTCGAC
ACAAATGTGAAGCACCTGGTGGTACGGACAGACATGGAGCTCATGGTGGTCACTTTCTGCATTCAAGTTCT
GCTCTCACATGAGGAGTCTACAGCTGAATATGGAAGGACAACAAGGATATGCACTGACAGCCCCAAGGAT
GGTTCTGTACAGGTGGACCCCAATCACTAATGCCAGTTGGAAGATTCTTTCTACAATCTTAAATTCAAC
AGTAATCTGGAGGGTTGGACCTCAGTGGAAATCCACTGAGTTACTCTGCAGTGCAATATCTCTGTGATG
CCATGATATACCCTGGCTGCCAACTAAAGACTTTGTGGCTTGTGAATGCGGCCCTCACACCCACATACTG
CTCACTCCTGGCCTCAGTGCTCAGTGCCTGCTCCAGCCTGAGAGAGCTAGACCTGCAGCTAAATGACCTG
TGTGACGATGGTGTAAAGGATGCTGTGTGAGGGGCTCAGGAATCGTGCCTGCAACCTCAGAATCCTGCGGC
TGGACCTGTACTCTCTCAGTGCCAGGTGATTACAGAGCTCAGGACACTGGAGGAAAATAATCTGAAGCT
GCACATCTCCAGCATCTGGATGCCACAAATGATGGTCCCCACTGAGAATGATGAAGAAGATATCCTG
ACCTCATTCAAGCAGCAGAGACAACAGTCAGGAGCCAATCCCATGAAAATTCTGGGGACTGAAGAAGACT
TCTGGGGCCCTATAGGACCTGTGGCTACTGAGGTGGTTTACAGAGAAAGGAACCTGTACCGAGTTCAATT
GCCCATGGCTGGTTCTACCCTGTCCCAGCACAAGACTCCACTTGTAGTGACAAGGGCAGTGACAATA
GAGATCGAATTCTGTGCCTGGAGCCAATTCCTGGACAAGACTCCCTTGCAGCAGAGTCACATGGTGGTTG
GACCTCTGTTTGACATCAAGGCTGAGCAAGGAGCTGTGACTGCAGTGACCTCCCTCATTTTGTGTCCTT
CAAAGACACAAAGGCAAGCACATTTGACTTCAAGGTGGCCCACTTTCAAGAACATGGGATGGTTCTAGAA
ACGCCAGATAGGGTGAAGCCTGGATACACAGTACTGAAAACCCAAGCTTCTCCCAATGGGAGTTGTAC
TGAGAATAATCCCTGCTGCCCGGCATTCATCCCCATTACTTCCATCACACTGATCTACTATCGAGTCAA
TCAGGAAGAAGTCACCCCTCACCTCTACCTAGTCCCTAATGACTGCACCATACAGAAGGCCATAGATGAT
GAAGAAATGAAGTTTCAGTTTGTGAGAATAACAAGCCACCCCAAGGAACTGGAGCTGTGCTACAGGAGCAG
GCTACATTGTGTCTGGTTCTGAGAACCTGGAAATCACCCCAAGGAACTGGAGCTGTGCTACAGGAGCAG
CAAGGAATTCCAACCTTCTCTGAGATATACGTTGGAAACATGGGTTTCAAGATTAAAGTGCAAAATCAAA
AACAAAAAGCACATGAACTCATATGGGAAGCCTTGTGAAACCAGGAGACCTCAGACCTGCTCTGCCCA
GGATTGCCAAGCCCTCAAAGATGCCCTTCTTGTGCACTTCATGGACCAGCATCGGGAGCAGCTGGT
AGCCCCAGTGACATCAGTGGACCCTCTTGGACAAGCTGCATGGTCTGGTGTGAATGAAGAATCCTAT
GAGGCAGTGCGGGCTGAGAACACAAACCAAGATAAGATGAGGAAGCTCTTCAACCTCAGCCGGTCTTGA
GTCGAGCCTGCAAGACCTATTCTACCAAGCTCTGAAGGAGACCCATCCTCACCTGGTCATGGACCTCTT
AGAAAAGTCAGGTGGGTCTCTTTGGGATCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001162414
Insert Size: 3534 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
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_001162414.1 , NP_001155886.1
RefSeq Size:	4131 bp
RefSeq ORF:	3534 bp
Locus ID:	637515
UniProt ID:	A1Z198
Cytogenetics:	11 B4

Gene Summary:

As the sensor component of the NLRP1 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 Nlrp1b, CASP1, and possibly PYCARD. Recruitment of proCASP1 to the inflammasome promotes its activation and CASP1-catalyzed IL1B and IL18 maturation and secretion in the extracellular milieu. Activation of NLRP1 inflammasome is also required for HMGB1 secretion. The active cytokines and HMGB1 stimulate inflammatory responses. Inflammasomes can also induce pyroptosis, an inflammatory form of programmed cell death (By similarity). May be activated by muramyl dipeptide (MDP), a fragment of bacterial peptidoglycan, in a NOD2-dependent manner (PubMed:18511561). Might be activated by *Toxoplasma gondii*, although at a lower extent than allele 1 (PubMed:24218483). Contrary to Nlrp1b allele 1, allele 2 is not activated by *Bacillus anthracis* lethal toxin (PubMed:16429160, PubMed:21170303, PubMed:24492532). [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) represents use of an alternate promoter and 5' coding region, compared to variant 1. The resulting isoform (3) has a distinct N-terminus, compared to isoform 1.