

Product datasheet for **MG215179**

Nlrp1b (NM_001040696) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	Nlrp1b
Synonyms:	ENSMUSG00000070390; Nalpb; OTTMUSG00000006087; OTTMUSG00000006089
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence: >MG215179 representing NM_001040696
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAACAATCTCAGCCCAAGAAGAAAAGTCGCACAAAGGTGGCTCAGCATGAGGGTCAACTAAATTTGA
ACCCACCTTCAAAAACAAGGAAACGTAAGAGGTGGAGCTGATGAAGCGCAGACCCAAAGCCAGAGGGACA
CTTGAAGCTAGGGACAATTCAAAAGTACACATAAAACAAAAGGAGAGACTCTGGACCCACATGGTCA
AGGAAAAGAAAGAATCTGGTCCAAAAGTTAACAAACCTACTACTCTTTGAAAAATTGTGCTCAAGAGGCT
CAGAAAACCTTGATCAGGAAAAGCTGGTATTTCATGTGAAGAAGAAGAAAGAGGACATATGATTGAGATCCA
AGACTTATTTGGCCAAACAGAGGTACCCATAAAAAGCCTCAATTAGTCATAATAGAGGGTCTGCTGGA
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TCCAGCATGTCTTCTCCTCAGTTGCAGGGAGCTGGCCAGTATGAGCAGCTGAGTCTGGCTGAGCTCAT
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GTCAAAGACAGCCTGTGCACACTCTGCTGGCAGTTTACTAGGAAATCCATCCTTCTGGGGCTTCCTT
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GTCTGGGGTTCTCCAAGTTTGAACGGGAGGTCTATTTCCGCAAAATATTTTGTGAAGGAGAGCGATGCAA
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CCTATCAACATCATCTGGGTTTGTCTCCACTGTCTGTATGAAAGTCAGGAAGAGGTGCTCCTGACATATGT
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 CCAACTTTCTCTGAGATACGTTGGAACATGGTTTACAGATTAAGCTGCAATCAAAAACAAAAAG
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 AAGCCCTCAAAGATGCCCTTCTTGTGCACTTATGGACCAGCATCGGGAGCAGCTGGTAGCCCGAGT
 GACATCAGTGGACCTCTCTTGGACAAGCTGCATGGTCTGGTGTGAATGAAGAATCCTATGAGGCAAGT
 CGGGCTGAGAACACAAACCAAGATAAGATGAGGAAGCTTCAACCTCAGCCGGTCTGGAGTCGAGCCT
 GCAAAGACCTATTCTACCAAGCTCTGAAGGAGACCCATCCTCACCTGGTGTGACCTCTTAGAAAAGTC
 AGGTGGGGTCTCTTTGGATCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTAA

Protein Sequence:

>MG215179 representing NM_001040696
 Red=Cloning site Green=Tags(s)

MEQSQPKKKSRTKVAQHEGQLNLPFTKTRKRKEVELMKRRPKPEGHLKLGIPKVHIKQKGETLDPTWS
 RKRKNLVQKLTNLLLFEKLCRSRGENLIRKSWYSCEEEERGHMIEIQDLFGPNRGTTHKPKQLVIIEGAAG
 IGKSTLARQVKRAWKEGQLYRNHFQHVFFLSRELAQYEQLSLAELIAQQQEVPTVPIRQILSHPKELLF
 ILDGDIDPAWVLAQNPCLHWSQRQPVHTLLGSLGKSILPGASFLLTARTALQKIIPYVQPPRRVE
 VLGFSKFEREVYFRKYFVKESDAIAAFRLVVSNPVLLTLCVWPWCWLVCTCLKKQMEQGGELSLTSQTT
 TALCLKYLSTIPGQHMRTQLRALCSLAAEGICQRRTLFSESDLCKQGLAEDIAATFLKIGILQKQASSL
 SYFAHLCLQEFFAVMSYILEDSDERCDGMFKRTVETLIEVYGRHTLCEEPTVHFLFGLVNEQGMREMK
 KIFDCKLPLGTELKMLKSTLGNPTYQHHLGLLHCLYESQEEVLLTYVLCNLHLTGPDKNYMEATVVSQTNV
 KHLVIQTDMLMVVTFICQFCHVRSLRVNMKGQGHKLTVAASMLYRWTPITNASWKILFYNLKFNSNL
 EGLDLSGNPLSYSVAVQYLCDAMIYPGCQLKTLWVECGLTPTYCSLLASVLSACSSSRELDLQLNDLCDD
 GVRMLCEGLRNACNLRIIRLDL YSLSAQVITELRTLEENNLKLISSIWMPQMMVPTENMDEEDILTSF
 KQQRQSGANPMEILGTEEDFWGPIGPVATEVVYRERNLYRVQLPMAGSYHCPSTRLHFVVTRAVTIEIE
 FCAWSQFLDKTPLQQSHMVVGPLFDIKAEQGAVTAVYLPHFVSLKDTKASTFDFKVAHFQEHGMVLETPD
 RVKPGYTVLKNPSFSPMGVVLRIIPAARHFIPITSITLIYYRVNQEEVTLHLVLPNDCTIQKAIIDDEEM
 KFQFVRINKPPVDNLFIGSRYIVSGSENLEITPKELELCYRSSKEFQLFSEIYVGNMGSEIKLQIKNKK
 HMKLIWEALLKPGDLRPAIPRIAQALKDAPSLHFMDQHQREQLVARVTSVDPLLDKHLVNLNEESYEAV
 RAENTNQDKMRKLFNLSRSWSRACKDLFYQALKETHPHLVMDLLEKSGGVSLSGS

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001040696

ORF Size: 3522 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.

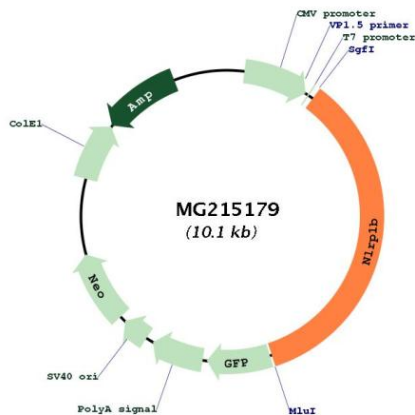
Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001040696.1](#), [NP_001035786.1](#)

RefSeq Size:	4159 bp
RefSeq ORF:	3525 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]

Product images:



Circular map for MG215179