

## Product datasheet for **MC223845**

### **Nlrp1b (NM\_001040696) Mouse Untagged Clone**

#### Product data:

|                           |                                                                                    |
|---------------------------|------------------------------------------------------------------------------------|
| Product Type:             | Expression Plasmids                                                                |
| Product Name:             | Nlrp1b (NM_001040696) 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:      | >MC223845 representing NM_001040696<br>Red=Cloning site Blue=ORF Orange=Stop codon |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**

ATGGAACAATCTCAGCCCAAGAAGAAAAGTCGCACAAAGGTGGCTCAGCATGAGGGTCAACTAAATTTGA  
ACCCACCTTCAAACAAGGAAACGTAAGAGGTGGAGCTGATGAAGCGCAGACCAAGCCAGAGGGACA  
CTTGAAGCTAGGGACAATTCCAAAAGTACACATAAAACAAAAGGAGAGACTCTGGACCCACATGGTCA  
AGGAAAAGAAAGAATCTGGTCCAAAAGTTAACAACTACTACTCTTTGAAAAATTGTGCTCAAGAGGCT  
CAGAAAATTGATCAGGAAAAGCTGGTATTCATGTGAAGAAGAAGAAAGAGGACATATGATTGAGATCCA  
AGACTTATTTGGCCAAACAGAGGTACCCATAAAAAGCCTCAATTAGTCATAATAGAGGGTGCTGCTGGA  
ATTGGGAAGTCAACACTGGCCAGGCAGGTGAAGAGAGCCTGGAAGGAAGGCCAGCTCTACAGGAATCACT  
TCCAGCATGTCTTCTCCTCAGTTGCAGGGAGCTGGCCAGTATGAGCAGCTGAGTCTGGCTGAGCTCAT  
AGCACAAGGCCAGGAAGTGGCCACCGTTCCCATCAGGCAGATCCTGTCTCACCCTAAGGAGCTGCTCTTC  
ATCCTGGATGGCATAGATGAGCCAGCATGGGTCTTGGCAGACCAGAATCCTGAGCTATGTCTGCACTGGA  
GTCAAAGACAGCCTGTGCACACTCTGCTGGCAGTTTACTAGGGAATCCATCCTTCTGGGGCTTCCTT  
CTTGCTCACAGCTCGGACCACAGCTCTACAGAAGATCATTCCTTATGTGGGCAGCCACGTCGGGTGGAA  
GTCCTGGGGTTCTCCAAGTTTGAACGGGAGGTCTATTTCCGCAAAATTTTGTGAAGGAGAGCGATGCAA  
TTGCTGCTTTTAGATTGGTGGTATCTAACCCAGTGCTCCTGACCCGTGTGTGAGGTTCCCTGGGTGTGCTG  
GTTGGTCTGCACTTGCTGAAAAAGCAGATGGAGCAGGGTGGAGAGCTCTCCCTGACCTCACAGACCACC  
ACAGCCCTCTGCCTGAAATACCTTTCCCTGACAATCCCAGGGCAGCACATGAGGACCCAGCTCAGAGCCC  
TCTGCTCACTGGCTGCTGAGGGGATCTGCCAAAGAAGAACCCTGTTCAGTGAAAGCGACCTCTGTAAGCA  
AGGGTTAGCAGAGGATGCCATTGCCACTTTCCTGAAGATCGGTATCCTTCAAAGCAGGCCAGCTCTCTG  
AGCTACAGCTTTGCCACTTGTGTCTCCAGGAGTTCTTTGCAGTCATGTCTTACATCTTGGAGGATAGTG  
ATGAAAGATGTGATGGTATGGAATCAAAGAAGTGTGGAACACTGATAGAAGTATATGGAAGACATAC  
TCTGTGTGAGGAACCACTGTGCACTTTCTATTTGGTCTTGTGAATGAACAGGGAATGAGAGAAATGAAA



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AAGATCTTTGACTGCAAACCTGCCTTTGGGGACAGAGTTGAAGATGCTAAAGAGCACCCCTAGGGAACCCAA  
 CCTATCAACATCATCTGGGTTTGTCTCCACTGTCTGTATGAAAGTCAGGAAGAGGTGCTCCTGACATATGT  
 GTTATGTAATCTTCACTTAACAGGGCCTGACAAAAATTACATGGAAGCCACAGTGTACAGACAAATGTG  
 AAGCACCTGGTGATACAGACAGATATGGAGTCTATGGTGGTCACTTTCTGCATTCACTTCTGTGTGTCACG  
 TGAGGAGTCTTCGGGTGAACATGAAAGGACAGCAGGGACATAAGCTGACAGTTGCCAGTATGGTTCTGTA  
 CAGGTGGACCCCAATCACTAATGCCAGTTGGAAGATTCTTTCTACAATCTTAAATTCAACAGTAATCTG  
 GAGGGGTTGGACCTCAGTGGAAATCCACTGAGTTACTCTGCAGTGAATATCTCTGTGATGCCATGATAT  
 ACCCTGGCTGCCAACTAAAGACTTTGTGGCTTGTGAATGCGGCCCTCACACCCACATACTGCTCACTCCT  
 GGCCTCAGTGCTCAGTGCCTGCTCCAGCCTGAGAGAGCTAGACCTGCAGCTAAATGACCTGTGTGACGAT  
 GGTGTAAGGATGCTGTGTGAGGGGCTCAGGAATCGTGCCTGCAACCTCAGAATCTGCGGCTGGACCTGT  
 ACTCTCTCAGTGGCCAGGTGATTACAGAGCTCAGGACACTGGAGGAAAATAATCTGAAGCTGCACATCTC  
 CAGCATCTGGATGCCACAAATGATGGTCCCACTGAGAACATGGATGAAGAAGATATCTGACCTCATTCTC  
 AAGCAGCAGAGACAACAGTCAGGAGCCAATCCCATGGAATTTCTGGGACTGAAGAAGACTTCTGGGGCC  
 CTATAGGACCTGTGGCTACTGAGGTGGTTTACAGAGAAAGGAACCTGTACCGAGTTCAATTGCCCATGGC  
 TGGTTCTTACCCTGTCCAGCACAAGACTCCACTTTGTAGTGACAAGGGCAGTGACAATAGAGATCGAA  
 TTCTGTGCTGGAGCCAATTCCTGGACAAGACTCCCTTGACGAGAGTGCATGTTGGTTGGACCTCTGT  
 TTGACATCAAGGCTGAGCAAGGAGCTGTGACTGCAGTGTACCTCCCTCATTTTGTGTCCCTCAAAGACAC  
 AAAGGCAAGCACATTTGACTTCAAGGTGGCCCACTTTCAAGAATCGGGATGGTTCTAGAAACGCCAGAT  
 AGGGTGAAGCCTGGATACACAGTACTGAAAAACCAAGCTTCTCCCAATGGGAGTTGTACTGAGAATAA  
 TCCCTGCTGCCCGGCACTTCATCCCCATTACTTCCATCACACTGATCTACTATCGAGTCAATCAGGAAGA  
 AGTCACCTTTCACCTCTACCTAGTCCCTAATGACTGCACCATACAGAAGGCCATAGATGATGAAGAAATG  
 AAGTTTCAGTTTGTGAGAATAAACAAGCCACCCCAAGTACAGCAATCTTTTCATTGGCTCCCGCTACATTG  
 TGTCTGGTTCTGAGAACCTGGAATCACCCCAAGGAACCTGGAGCTGTGCTACAGGAGCAGCAAGGAATT  
 CCAACTCTTCTGAGATATACGTTGGAACATGGGTTTACAGAGTTAAGCTGCAAAATCAAAAACAAAAAG  
 CACATGAAACTCATATGGGAAGCCTTGCTGAAACCAGGAGACCTCAGACCTGCTCTGCCAGGATTGCC  
 AAGCCCTCAAAGATGCCCTTCTTGTGCACTTCATGGACCAGCATCGGAGCAGCTGGTAGCCCGAGT  
 GACATCAGTGGACCTCTCTTGGACAAGCTGCATGGTCTGGTGTGAATGAAGAATCCTATGAGGCAGTG  
 CGGGCTGAGAACACAAACCAAGATAAGATGAGGAAGCTCTTCAACCTCAGCCGGTCTGGAGTCGAGCCT  
 GCAAAGACCTATTCTACCAAGCTCTGAAGGAGACCCATCCTCACCTGGTCATGGACCTCTTAGAAAAGTC  
 AGGTGGGGTCTCTTTGGGATCCTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

Sgfl-MluI

**ACCN:**

NM\_001040696

**Insert Size:**

3525 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).