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Product datasheet for MG215349

Nlrp1b (NM_001162414) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	Nlrp1b
Synonyms:	ENSMUSG00000070390; Nalp1b; OTTMUSG00000006087; OTTMUSG00000006089
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG215349 representing NM_001162414
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAAGAATCTCAGTACAAGCAGGAACATAACAAAAAGGTAGCTCAGGATGAAGGTCAAGAGGACAAGG
ACACCATCTTCGAAACAATAGAAGCTATAGAGGCAAAGCTGATGGAGCTCAAAACCAACCCAGAGAGTAC
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AACCCCATCAACCACCTTGCCTGGGTTTGCTCCACTGTCTATATGAAAATCAGGATATGAAGCTCCTGAC
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AGAAAAGTCAGGTGGGGTCTCTTTGGGATCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG215349 representing NM_001162414
Red=Cloning site Green=Tags(s)

MEESQYKQEHNKKVAQDEGQEDKDTIFETIEAIEAKLMELKTNPESTFNYGIFPEVYMNQGEEILYPAWS
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NKKHMKLIWEALLKPGDLRPALPRIAQALKDAPSLLHFMDQHREQLVARVTSVDPLLDKLHGLVLNEESY
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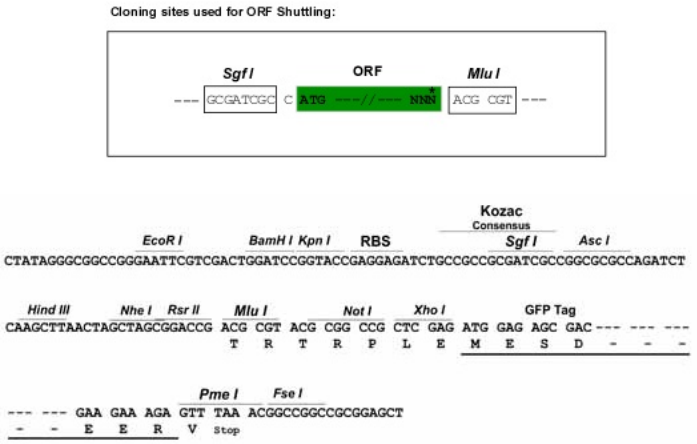
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001162414

ORF Size: 3531 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

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_001162414.1, NP_001155886.1

RefSeq Size: 4131 bp

RefSeq ORF: 3534 bp

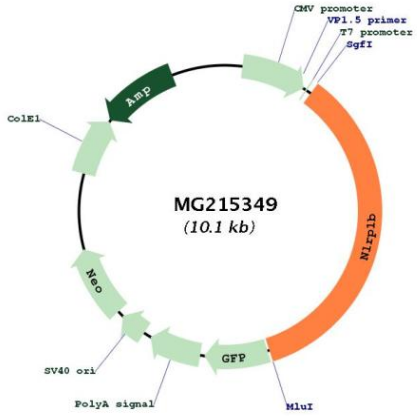
Locus ID: 637515

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]

Product images:



Circular map for MG215349