

## Product datasheet for **MG221409**

### Nlrp12 (NM\_001033431) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Nlrp12 (NM\_001033431) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Nlrp12  
**Synonyms:** Nalp12; PYPAF7  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG221409 representing NM\_001033431  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTTGCCGTCTACAGCCAGGGATGGCCTCTATCGACTGTCTACCTACCTGGAAGAACTCGAGGCTGGGG  
 AACTGAAGAAATTCAAATTATTCCTGGGGATTGCAGAGGACCTGAGCCAGGACAAAATCCCTGGGGACG  
 AATGGAGAAGGCTGGTCTCTGGAAATGGCTCAGCTGATGGTGGCCACATGGGGACAAGGGAGGCTTGG  
 CTTCTGGCTCTCAGCACCTTTCAGAGGATTCACAGGAAGGACCTGTGGGAGCGAGGACAGGGAGAAGACC  
 TGGTGAGGGTCACTCAAATAATGGTCTATGCCTTTTTGAGAGCCAATCAGCGTGCCTTTGGATGTCTC  
 TCCAATGCTCCAAGAAAAGATCTACAGACAACCTACAAAGACTATGTCCGAAGGAAATCCAGCTAATG  
 GAAGACCGCAATGCACGATTAGGCGAATGTGTGAACCTGAGCAATCGTTACACTCGGCTTCTCCTAGTAA  
 AAGAACACTCAAATCCTATCTGGACACAGCAGAAATTTGTAGATGTAGAGTGGGAACGCTCCAGAACCAG  
 GCGTCACCAGACTAGTCTATCCAAATGGAGACCCTCTTTGAGCCAGACGAAGAACGCCCCGAGCCACCA  
 CACACAGTGGTATTACAAGGGGCAGCGGGGATGGGGAAGTCCATGCTGGCCACAAAAGTATGTTGGACT  
 GGGCCGATGGGAGGCTCTTCCAAGGCCGTTTGTATGTCTTATATCAGCTGCAGGGAGTTGAATAG  
 AAGCCACACCCAGTGCAGTGTACAAGACCTCATCTCCAGCTGCTGGCCGAGCGTGGTATATCCCTCGAA  
 GACCTCATGCAGGCTCCTGACCGTCTCCTATTCATCATTGATGGCTTCGATAAACTCCATCCTTTCTTCC  
 ATGATGCTCAGGGTCCCTGGTGCCTCTGCTGGGAGGAGAAACAACCTACTGAAAGTCTCCTCGGAAGTCT  
 GATTCGGAGGTTGCTTCTGCCCCAGTCTCTGCTCATCACCACACGACCCTGTGCACTGGAGAAGCTG  
 CACGGCTTGCTAGAACACCCAGGCACGTGGAGATCCTGGGCTTCTCCGAGGAAGCTAGGAAGGAATATT  
 TCTACAGATATTTCCACAACACTGGACAAGCAAGCCGGGTGTTAAGCTTCTTGATGGACTATGAGCCCT  
 CTTTACCATGTGTTTTGTTCCCATGGTGTCTGGGTGGTCTGCACCTGCCTAAAGCAGCAGCTGGAAAGT  
 GGGGAGCTTTTAAGACAAACACTAGGACCACCACAGCTGTTTATGTTCTACCTTCTGAGCCTGATGC  
 AGCCCAAGCCAGGACTCCAACCTCAAAGTCCCAGCCAACCAGAGAGGCTGGTCTCTCTGGCTGCAGA  
 GGGCCTCTGGAATCAGAAGATTCTATTTGATGAACAGGATCTTGGGAAACACGGCCTAGATGGAGCAGAT



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GTGTCCACTTTCCTCAACGTGAACATATTCAGAAAGGGTATCAAATGTGAGAAATCTACAGCTTCATCC  
 ACCTGAGTTTCCAGGAATTCTTCGCAGCCATGACTGTGCACTGAATGGCAGAGAGGCGGTGAGGAGAGC  
 GCTGGCTGAGTATGGTTTTTCGAAAGGAATTCTTGGCCCTCACGGTCCACTTTCTGTTTGGCCTCCTC  
 AACGAAGAGATGAGATGCTACCTTGAGAGGAATCTCGGCTGGAGCATCTCCCTCAGGTGAAGGAGGAAG  
 TGTTGGCATGGATCCAAAACAAGGCTGGGAGTGAAGGCTCCACCTGCAGCATGGCTCCCTGGAGCTACT  
 CAGCTGCTTGTATGAGGTCCAGGAGGAGGACTTCATCCAGCAGGCCCTGAGCCACTTTCAAGTGGTTGTA  
 GTCAGAAGCATCTCAACAAGATGGAGCACATGGTCTGCTCGTTTTGTGCGAGGTATTGCAGAAGTACAG  
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 CTCCGGATCAGCCTGCCAGGACCTCGCAGCCGCTGTCATCGCAACAGGAATTTAATCAGGCTGGACCTC  
 AGTGACAACAGCATTGGGGTCCAGGCTGGAGCTGCTCTGTGAGGGGCTGCAGCACCCAGGTGTAGGC  
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 CAACAACATCATCTGGTAGAAGTGGATCTGACAGGAAACCCCTTGAAGATTGGGGCTGAAGTACTG  
 TGCAAGGGCTAAGGCACCCTGTCTGCAGGCTGGTACCCTGTGGCTGAAGATCTGCCACCTTGGACAAG  
 CTTCTCGAAGATCTGGCCTCTACTCTCAAAATGAACCAGAGCCTGCTGGAGCTGGACCTGGGTCTGAA  
 TGATCTTGGAGATTCTGGGGTGTCTGCTGTGTGAAGGCCTCAGTATCCAGATTGCAAACTCCAGACC  
 CTTCCGTTGGGCATTTGCCGACTGGGCTCAGTCGCGTGTGTGGGGATCGCCAGTGTGCTCCAGGTCAACA  
 CATGCCTCCAAGAGCTGGACCTGAGCTTCAATGACTTGGGAGACAGGGGCTGCAGCTGTGGGGGAAGG  
 CCTGAGGCACCAGACCTGCAGACTCCAGAAGCTGTGGCTGGACAACCTGCCGACTCACCTCCAAGCATGT  
 GAGGACCTTTCTCTATCTGGGAATCAGCCAGACCCTGCATGAGCTTTATTTGACCAATAATGCTCTGG  
 GGGACACAGGTGTCTGTCTGTGTGCAAGAGGCTGAGGCATCCAGGCTGCAAGCTTCGAGTCTGTGGCT  
 GTTTGGGATGGACTGAATAAAAAGACTCACAGGAGGATGGCAGCACTTCGAGTCACAAAACCGTACCTG  
 ATATTGGGTGT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>MG221409 representing NM\_001033431

Red=Cloning site Green=Tags(s)

MLPSTARGLYRLSTYLEELEAGELKFKFLGLIAEDLSQDKIPWGRMEKAGPLEMAQLMVAHMGTTREAW  
 LLALSTFQRIHRKDLWERGQGEDLVRVTPNNGLCLFESQSACPLDVSPNAPRKDLQTTYKYVRRKFQLM  
 EDNRNARLGEVNL SNRYRLLLLVKEHSNPIWTQQKFVDVEWERSRTRRHQTSPIQMETLFEPEERPEPP  
 HTVVQLQAAGMGKSM LAHKVMLDWADGRLFQGRFDYVFI SCRELNRSHTQCSVQDLISSCWPERGISLE  
 DLMQAPDRLLFIIDGFDKLHPSFHDAQGPWCLCWEEKQPTVLLGSLIRRLLLPQVSLITTRPCALEKL  
 HGLLEHPRHVEILGFSEEARKEYFYRYFHNTGQASRVLSFLMDYEPLFTMCFVPMVSWVCTCLKQQLS  
 GELLRQTPRTTAVYMFYLLSLMQPKPGTPTFKVPANQRGLVSLAAEGLWNQKILFDEQDLGKHGLDGAD  
 VSTFLNVNIFQKGIKCEKFSYF IHL SFQEFFAAMYCALNGREAVRRALAEYGF SERNFLALTVHFLFGLL  
 NEEMRCYLERNL GWSISPQVKEEV LAWIQNKAGSEGSTLQHGSLELLSCLYEVQEEDFIQQALSHFQVVV  
 VRSISTKMEHVMVCSFCARYCRSTEVLHLHGSAYSTGMEDDPPEPSGVQTQSTYLQERNMLPDVYSAYLSA  
 AVCTNSNLIELALYRNALGSQGVRLLCQGLRHASCKLQNLRLKRCQISGSACQDLAAAVIANRNLIRLDL  
 SDNSIGVPGLELLCEGLQHPRCRLQMIQLRKCLLEAAAGRSLASVLSNNSYLVLDL TGNPLEDSGLKLL  
 CQGLRHPVCRRLTLWLKICHLGQASCEDLASTLKMNSLLELDLGLNDLGD SGVLLLCEGLSHPDCKLQT  
 LRLGICRLGSVACVGIASV LQVNTCLQELDL SFNDL GDRGLQLLGEGLRHQT CRLQKLWLDNCGLTSKAC  
 EDLSSILGISQTLHEL YLTNNALGDTGVCLLCKRLRHPGCKLRV LWF GMDLNKKTHRRMAALRVTKPYL  
 DIGC

TRTRPLE – GFP Tag – V

**Chromatograms:**

[https://cdn.origene.com/chromatograms/ja2037\\_e03.zip](https://cdn.origene.com/chromatograms/ja2037_e03.zip)

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



ACCN: NM\_001033431

ORF Size: 3162 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](mailto: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).

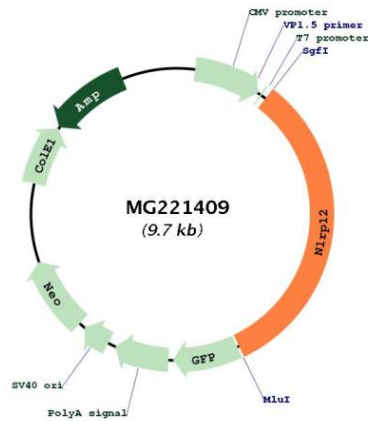
Reconstitution Method:

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.

RefSeq: [NM\\_001033431.1](#), [NP\\_001028603.1](#)  
 RefSeq Size: 4329 bp  
 RefSeq ORF: 3165 bp  
 Locus ID: 378425  
 UniProt ID: [E9Q5R7](#)  
 Cytogenetics: 7 A1

**Gene Summary:** Plays an essential role as an potent mitigator of inflammation (PubMed:26521018, PubMed:30559449). Primarily expressed in dendritic cells and macrophages, inhibits both canonical and non-canonical NF-kappa-B and ERK activation pathways (PubMed:30559449). Functions as a negative regulator of NOD2 by targeting it to degradation via the proteasome pathway (PubMed:30559449). In turn, promotes bacterial tolerance (PubMed:30559449). Inhibits also the DDX58-mediated immune signaling against RNA viruses by reducing the E3 ubiquitin ligase TRIM25-mediated 'Lys-63'-linked DDX58 activation but enhancing the E3 ubiquitin ligase RNF125-mediated 'Lys-48'-linked DDX58 degradation (By similarity). Acts also as a negative regulator of inflammatory response to mitigate obesity and obesity-associated diseases in adipose tissue (PubMed:30212649).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG221409