

Product datasheet for **MG227430**

Nlrc4 (NM_001033367) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nlrc4 (NM_001033367) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Nlrc4
Synonyms:	9530011P19Rik; Card12; CLAN; CLAN1; CLANA; CLANB; CLANC; CLAND; IPAF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG227430 representing NM_001033367 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAACCTTATAAGGAACAACAGACGAGCCCTTATCAAAGGATGGGCTTAACAGTTACCAAGCAAATCT
GCGATGACCTCTTTGCATTGAACGTTCTCAACAATCAAGAAGCTAATGTCATTTACTGTGAGCCCTTGG
GCAGGAAGCCGCCGAAAGATCATCCATATGACTATGCAGAAGGGCTCAGCGGCTGCAACCTCTTTCTT
AAGAGTCTTGAAAAGTGGACTATTTGTGTATCAGGACTTAACGGACAAAATCTTTCTATCAGGTCA
CAGAAGAAGACCTGAATGTTTTGGCCAGAATTTAAAGGACTTGTACAACAGCCCTGCTTTTCTGAACCT
CTACCCCTGGGTGAAGATATCGACATAATTTTTAATCTGGAGAAAACCTTACAGAACCTATCATGTGG
AAGAAGGACCATCGTCATCACCGTGTGGAGCAGCTGACTTTGGGACGCTGCTCGAGGCTCTGAAGACC
CCTGCCTGATTGAAGCGAGTCTGGCAAAGGGAAGTCCACCCTGCTGCAGAGAATCGCTATGCTCTGGGC
CTCTGGGGGCTGCAGGGCTCTGAAGGGGTTAGATTAGTCTTCTCATCCACCTGAGAAGCGCCAGGGGG
GGACTATTCGAAACACTGTACGATCAGCTCCTGAACATACCCGACTTCATCAGCAAGCCGACCTCAAGG
CTCTGTGCTGAAGCTACACAAGGAGGTCTCTTCTTCTCGATGGTTACAATGAATCCATCCCCAGAA
CTGCCAGAAAATTGAAGCCCTGATAAAGGAAAACCATCGCTTCAAGAACATGGTCATTGTACCACCACC
ACGGAGTGCCTGAGGCATATCAGACATGTTGGCGCCCTGACTGCGGAGGTGGGAGATATGACCGAAGCA
GTGCCAAAGATCTCATCGAGGCAGTGTGGTACCTGATCAGTTGAACGCCTGTGGGCCAAATCCAGGA
GTCCAGGTGCCTGAGAAATCTGATGAAGACCCCTCTTCTCGTGGTGATCACCTGTGCAATTCAGATGGGC
AGACAGGAATTCAGCTCACACCCAAACCATGCTGTTCCAAACCTTCTACGACCTCTGATACAGAAAA
ACAGCCACAGATATAGAGGTGGAGCTTCAGGTGATTTGGCAGGAGCCTAGACTACTGTGGAGACCTGGC
CCTAGAAGGTGTGTTGCGCCACAAATTTGATTTGAACCCGAGCATGGGTCCAGCATGAACGAGGACGTC
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GAGCAAAGGGAACAGCTACTTAAACAAATGGTTCCATCTCTGACATCACATCCCTATATGGCAATCTG



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CTCCTCTACACGTGTGGGTCGTCCACAGAAGCAACCAGGGCGGTCATGAGGCACCTTGAATGGTTTATC
 AGCACGGCAGCCTACAAGGACTTTCAGTCACCAAGAGGCCTCTCTGGAGGCAGGAATCAATCCAGAGTCT
 GAGAAATACCACTGAGCAAGATGTTCTGAAAGCCATCAATGTAATTCCTTCGTAGAGTGTGGCATCAAT
 TTGTTCTCAGAGAGTATGTCTAAATCAGACCTGAGCCAAGAATTTGAAGCTTTCTTTCAAGGTAAGGTT
 TATACATCAACTCAGAGAACATCCCTGACTATTTATTTGACTTCTTTGAATACTTGCCATTAATGTGCAAG
 CGCATTGGACTTCGTGAAGTTGGATTTCTATGAAAGAGCTACAGAGTACAGGACAGGCAAGGAGAAGAT
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 CAAATATCTGGGGAAGATATTCAGCTCTGCCACCAACCTCCGGCTGCATATCAAGAGATGTGCAGCCATG
 GCTGGAAGACTCAGCTCAGTCTCAGAACCTGCAAGAACATGCATACCCTCATGGTGAAGCCAGTCCCC
 TCACCACGGATGACGAACAGTACATCACATCTGTGACAGGCTCCAGAACTTAAGTATTCACCGCTTGCA
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 GGAATGAAGCTCTACAGGAAGTATCGGCAGGCTTGGCGTTCTGGGAGAGCTCACTACATTGATGCTGCC
 TTGGTGTGGGATGTGCACACCAGCCTGCCAAGCTGTTGAAGCAGTTGGAGGGGACCCAGGACTTGCC
 AAAGTTGGATTGAAAACTGGAGACTCAGAGACGAAGAGATTAAGTTAGGTGAATTTCTGGAGATGA
 ATCCTCTGAGAGACTTGACAGCTTGGATTTAGCGGGGCACTGTGTGAGCAGTGCAGGATGGCTTACTT
 CATGAATGTGTTTGAAGTCTGAAGCAGTTAGTGTTTTTGACTTTAGCACTGAGGAGTTCTTACCGGAT
 GCAGCACTGGTGAGGAACTTAGTCAAGTGTATCCAAGTTAACTCTTCTGCAAGAGGTAAGACTCACGG
 GCTGGGAGTTTGTGACTATGATATTAGCGCTATTAAGGCACCTTAACTAGTGACTGCT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG227430 representing NM_001033367
 Red=Cloning site Green=Tags(s)

MNFIRNNRRALIQRMLTVTKQICDDL FALNVLNNQEANVIYCEPLEQEARKIIHMTMQKGSAAACNLFL
 KSLNWDYFVYQDLTGQNL SYQVTEEDLNVLAQNLKDL YNSPAFLNFYPLGEDIDIIFNLEKTFTEPIMW
 KKDHRHHRVEQLTLGSLLEALKSPCLIEGESGKGKSTLLQRIAMLWASGGCRALKGFRLVFFIHLRSARG
 GLFETLYDQLLNIPDFISKPTFKALLLKLHKEVLFLLDGYNEFHPQNCPEIEALIKENHRFKNMVIVTTT
 TECLRHIRHV GALTAEVGDMTEDSAKDL IEAVLVPDQVERLWAQIQESRCLRNLKMTPLFVVITCAIQMG
 RQEFQAHTQTMLFQTFYDLLIQKNSHRYRGGASGDFARSLDYCGDLAEGVFAHKFDPEPEHGSSMNEDV
 LVTIGLLCKYTAQR LKPTYKFFHKS FQEYTAGRRL SSSLTSKEPEEVSKGNSYLNKMVSI SDITSLYGNL
 LLYTCGSSTEATRAVMRHLAMVYQHGS LQGLSVTKRPLWRQESIQSLRNTTEQDVLKAINVNSFVECGIN
 LFSSEMSKSDL SQEFAFFQGS L YINSENI PDYLFDFEYLPNCASALDFVKLDFYERATESQDKAEEN
 VPGVHTEGPSEYI PPRAVSLFFNWQEFK TLEVTLRDLNKLKQDIKYL GKIFSSATNLRLHIKRC AAM
 AGR LSSVLR TCKNMHTLMVEASPLTTDDEQYITSVTGLQNL SIHRLHTQQLPGGLIDSLGNLKNLERLIL
 DDIRMNEEDAKNLAEGLRSLKMRLLHLTHLSDIGEGMDYIVKSLSEESCDLQEMKLVACCLTANSVKVL
 AQNLHNL IKLSILDISENYLEKDGNEALQELIGRLGVLGELTTLMLPWCWDVHTSLPKLLKQLEGTPGLA
 KLGLKNWRLRDEEIKSLGEFLEMNPLRDLQQLDLAGHCVSSDGWL YFMNVFENLQLVFFDFSTEEFLPD
 AALVRKLSQVLSKLTLLQEVKLTGW EFDDYDISAIKGTFLKLVTA

TRTRPLE – GFP Tag – V

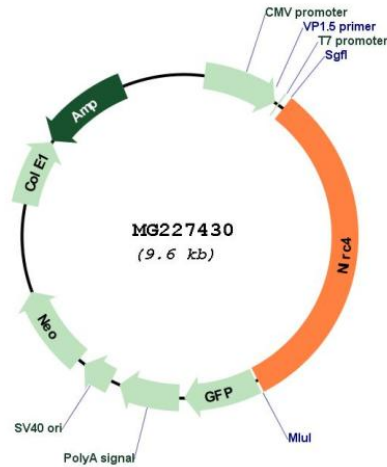
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001033367

ORF Size: 3072 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:	<ol style="list-style-type: none">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:	<u>NM_001033367.3</u> , <u>NP_001028539.1</u>
RefSeq Size:	3838 bp
RefSeq ORF:	3075 bp
Locus ID:	268973
UniProt ID:	<u>Q3UP24</u>
Cytogenetics:	17 E2
Gene Summary:	Key component of inflammasomes that indirectly senses specific proteins from pathogenic bacteria and fungi and responds by assembling an inflammasome complex that promotes caspase-1 activation, cytokine production and macrophage pyroptosis. The NLRC4 inflammasome is activated as part of the innate immune response to a range of intracellular bacteria. It senses pathogenic proteins of the type III secretion system (T3SS) and type IV secretion system (T4SS) such as flagellin and PrgJ-like rod proteins via the Naip proteins (Naip1, Naip2 or Naip5): specific Naip proteins recognize and bind pathogenic proteins, driving assembly and activation of the NLRC4 inflammasome. The NLRC4 inflammasome senses Gram-negative bacteria such as <i>L.pneumophila</i> and <i>P.aeruginosa</i> , enteric pathogens <i>S.typhimurium</i> (<i>Salmonella</i>) and <i>S.flexneri</i> and fungal pathogen <i>C.albicans</i> . In intestine, the NLRC4 inflammasome is able to discriminate between commensal and pathogenic bacteria and specifically drives production of interleukin-1 beta (IL1B) in response to infection by <i>Salmonella</i> or <i>P.aeruginosa</i> . In case of <i>L.pneumophila</i> infection the inflammasome acts by activating caspase-7.[UniProtKB/Swiss-Prot Function]