

## Product datasheet for **RC233046**

### TLR4 (NM\_138557) Human Tagged ORF Clone

#### Product data:

|                    |                                         |
|--------------------|-----------------------------------------|
| Product Type:      | Expression Plasmids                     |
| Product Name:      | TLR4 (NM_138557) Human Tagged ORF Clone |
| Tag:               | Myc-DDK                                 |
| Symbol:            | TLR4                                    |
| Synonyms:          | ARMD10; CD284; TLR-4; TOLL              |
| Vector:            | pCMV6-Entry (PS100001)                  |
| E. coli Selection: | Kanamycin (25 ug/mL)                    |
| Cell Selection:    | Neomycin                                |



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**ORF Nucleotide  
Sequence:**

>RC233046 representing NM\_138557  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCCCTACTCAATCTCTCTTTAGACCTGTCCCTGAACCCTATGAACTTTATCCAACCAGGTGCATTTA  
 AAGAAATTAGGCTTCATAAGCTGACTTTAAGAAATAATTTTGATAGTTTAAATGTAAATGAAAACCTGTAT  
 TCAAGGCTCGGCTGGTTTAGAAGTCCATCGTTTGGTTCTGGGAGAATTTAGAAATGAAGGAACTTGAA  
 AAGTTTGACAAATCTGCTCTAGAGGCTGTGCAATTTGACCATTGAAGAATTCGATTAGCATACTTAG  
 ACTACTACCTCGATGATATTATTGACTTATTTAATTTGTTTGACAAATGTTTCTTCATTTTCCCTGGTGAG  
 TGTGACTATTGAAAGGGTAAAAGACTTTTCTTATAATTTTCGGATGGCAACATTTAGAATTAGTAACTGT  
 AAATTTGGACAGTTTCCACATTGAAACTCAAATCTCTCAAAGGCTTACTTTCACTTCCAACAAAGGTG  
 GGAATGCTTTTTCAGAAGTTGATCTACCAAGCCTTGAGTTTCTAGATCTCAGTAGAAATGGCTTGAGTTT  
 CAAAGTTGCTGTTCTCAAAGTGATTTTGGGACAACCAGCCTAAAGTATTTAGATCTGAGCTTCAATGGT  
 GTATTACCATGAGTTCAAACCTTCTGGGCTTAGAACAACTAGAACATCTGGATTTCCAGATTCCAATT  
 TGAACAAATGAGTGAGTTTTCAGTATTCTATCACTCAGAAACCTCATTACCTTGACATTTCTCATACT  
 TCACACCAGAGTTGCTTTCAATGGCATCTTCAATGGCTTGTCCAGTCTCGAAGTCTTGAAATGGCTGGC  
 AATTCTTTCCAGGAAAACCTTCTTCCAGATATCTTACAGAGCTGAGAAACTTGACCTTCTGGACCTCT  
 CTCAGTGTCAACTGGAGCAGTTGTCTCCAACAGCATTTAACTCACTCTCCAGTCTCAGGTAATAATAT  
 GAGCCACAACAACCTCTTTTCAATGGATACGTTTCTTATAAGTGCTGAACTCCCTCCAGGTTCTTGAT  
 TACAGTCTCAATCACATAATGACTTCCAAAAACAGGAACTACAGCATTTTCCAAGTAGTCTAGCTTTCT  
 TAAATCTTACTCAGAATGACTTTGCTTGTACTTGTGAACACCAGAGTTTCTGCAATGGATCAAGGACCA  
 GAGGCAGCTCTTGGTGGAAAGTTGAACGAATGGAATGTGCAACACCTTCAGATAAGCAGGGCATGCCTGTG  
 CTGAGTTTGAATATCACCTGTCAGATGAATAAGACCATCATTGGTGTGTCGGTCCCTCAGTGTGCTTGTAG  
 TATCTGTTGTAGCAGTTCTGGTCTATAAGTTCTATTTTACCTGATGCTTCTTGCTGGCTGCATAAAGTA  
 TGGTAGAGGTGAAAACATCTATGATGCCTTTGTTATCTACTCAAGCCAGGATGAGGACTGGGTAAGGAAT  
 GAGCTAGTAAAGAATTTAGAAGAAGGGTGCCTCCATTTAGCTCTGCCTTCACTACAGAGACTTTATTC  
 CCGGTGTGGCCATTGCTGCCAACATCATCCATGAAGGTTCCATAAAAGCCGAAAGGTGATTGTTGTGGT  
 GTCCAGCACTTCCAGAGCCGCTGGTGTATCTTTGAATATGAGATTGCTCAGACCTGGCAGTTTCTG  
 AGCAGTGTGCTGGTATCATCTTATTGCTCCTGCAGAAGGTGGAGAAGACCCTGCTCAGGCAGCAGGTGG  
 AGCTGTACCGCCTTCTCAGCAGGAACACTTACCTGGAGTGGGAGGACAGTGTCTGGGGCCGCACATCTT  
 CTGGAGACGACTCAGAAAAGCCCTGCTGGATGGTAAATCATGGAATCCAGAAGGAACAGTGGGTACAGGA  
 TGAATTGGCAGGAAGCAACATCTATC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC233046 representing NM\_138557  
 Red=Cloning site Green=Tags(s)

MPLLNLSDLNPMNFIQPGAFKEIRLHKLTLRNNFDSLNMKTCIQGLAGLEVHRLVLGFEFRNEGNLE  
 KFDKSALEGLCNLTIEEFRLAYLDYYLDDIIDLFNCLTNVSSFSLVSVTIERVKDFSYNFGWQHLELVNC  
 KFGQFPTLKLKSLKRLTFTSNKGGNAFSEVDLPSLEFLDLSRNGLSFKGCCSQSDFGTTSLKYLDLSFNG  
 VITMSSNFLGLEQLEHLDFQHSNLKQMSEFSVFLSLRNL IYLDISHTHTRVAFNGIFNGLSSLEVLKMGAG  
 NSFQENFLPDIFTELRLNLTFLDL SQCLEQLSPTAFNSLSSLQVLNMSHNNFFSLDTPYKCLNSLQVLD  
 YSLNHIMTSKKQELQHFPSSLAFLNLTQNDFACTCEHQSFQWIKDQRQLLVEVERMECATPSDKQMPV  
 LSLNITCQMNKTIIGVSVLSVLVSVVAVLVYKFYFHLMLLAGCIKYGRGENIYDAFVIYSSQDEWDVWRN  
 ELVKNLEEGVPPFQLCLHYRDFIPGVAIAANIIEGFHKSARKVIVVVSQHF IQSRWCIFEYEAQTWQFL  
 SSRAGIIFIVLQKVEKTLRQQVELYRLLSRNTYLEWEDSVLGRHIFWRRLRKALLDGKSWNPEGTVGTG  
 CNWQEATSI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

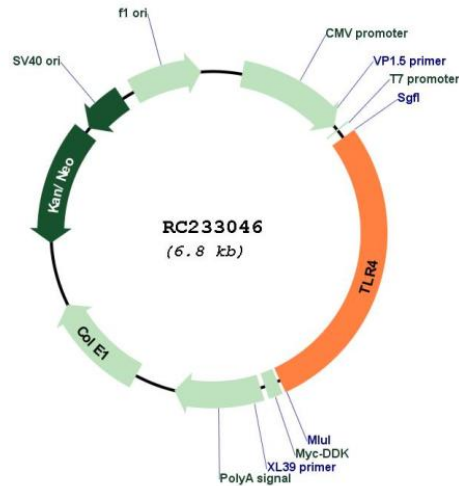
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



Plasmid Map:



ACCN: NM\_138557

ORF Size: 1917 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\\_138557.3](#)

**RefSeq Size:** 5494 bp

**RefSeq ORF:** 1920 bp

**Locus ID:** 7099

**UniProt ID:** [O00206](#)

**Cytogenetics:** 9q33.1

**Domains:** TIR, LRRCT, LRR, LRR\_TYP

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Pathogenic Escherichia coli infection, Toll-like receptor signaling pathway

**MW:** 73.8 kDa

**Gene Summary:** The protein encoded by this gene is a member of the Toll-like receptor (TLR) family which plays a fundamental role in pathogen recognition and activation of innate immunity. TLRs are highly conserved from Drosophila to humans and share structural and functional similarities. They recognize pathogen-associated molecular patterns that are expressed on infectious agents, and mediate the production of cytokines necessary for the development of effective immunity. The various TLRs exhibit different patterns of expression. In silico studies have found a particularly strong binding of surface TLR4 with the spike protein of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of Coronavirus disease-2019 (COVID-19). This receptor has also been implicated in signal transduction events induced by lipopolysaccharide (LPS) found in most gram-negative bacteria. Mutations in this gene have been associated with differences in LPS responsiveness, and with susceptibility to age-related macular degeneration. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2020]