

## Product datasheet for **RC234898**

### TLR4 (NM\_003266) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TLR4 (NM_003266) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TLR4
Synonyms:	ARMD10; CD284; TLR-4; TOLL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC234898 representing NM\_003266  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAGCTGAATTTCTACAAAATCCCCGACAACCTCCCCTTCTCAACCAAGAACCTGGACCTGAGCTTTA  
 ATCCCCTGAGGCATTTAGGCAGCTATAGCTTCTCAGTTTCCCAGAAGTGCAGGTGCTGGATTTATCCAG  
 GTGTGAAATCCAGACAATTGAAGATGGGCATATCAGAGCCTAAGCCACCTCTCTACCTTAATATTGACA  
 GGAAACCCCATCCAGAGTTAGCCCTGGGAGCCTTTTCTGGACTATCAAGTTTACAGAAGCTGGTGGCTG  
 TGGAGACAAATCTAGCATCTCTAGAGAACTTCCCATTGGACATCTCAAACTTTGAAAGAACTTAATGT  
 GGCTCACAACTTATCCAATCTTCAAATTACCTGAGTATTTTTCTAATCTGACCAATCTAGAGCACTTG  
 GACCTTCCAGCAACAAGATTCAAAGTATTTATTGCACAGACTTGCGGTCTACATCAAATGCCCTAC  
 TCAATCTCTCTTAGACCTGTCCCTGAACCCTATGAACCTTATCCAACCAGGTGCATTTAAAGAAATTAG  
 GCTTCATAAGCTGACTTTAAGAAATAATTTTGATAGTTTAAATGTAATGAAAACCTGTATTCAAGGCTG  
 GCTGGTTTAGAAGTCCATCGTTTGGTCTGGGAGAATTTAGAAATGAAGGAAACTTGAAAAGTTTGACA  
 AATCTGCTCTAGAGGGCCTGTGCAATTTGACCATTGAAGAATTCGATTAGCATACTTAGACTACTACCT  
 CGATGATATTATTGACTTATTTAATTTGTTTGACAAATGTTTCTTCATTTCCCTGGTGAGTGTGACTATT  
 GAAAGGGTAAAAGACTTTTCTTAATAATTTCCGATGGCAACATTTAGAATTAGTAACTGTAATTTGGAC  
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 GAAAACATCTATGATGCCTTTGTATCTACTCAAGCCAGGATGAGGACTGGGTAAGGAATGAGCTAGTAA  
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 CCTTCTCAGCAGGAACACTTACCTGGAGTGGGAGGACAGTGTCTGGGGCGGCACATCTTCTGGAGACGA  
 CTCAGAAAAGCCCTGCTGGATGGTAAATCATGGAATCCAGAAGGAACAGTGGGTACAGGATGCAATTTGGC  
 AGGAAGCAACATCTATC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC234898 representing NM\_003266  
Red=Cloning site Green=Tags(s)

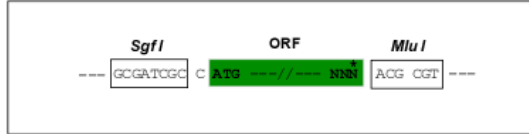
MELNFYKIPDNLPFSTKNLDL SFNPLRHLGYSFFSFPELQVLDLSRCEIQTIEDGAYQSLSHLSTLILT  
GNPIQSLALGAFSGLSSLQKLVAVETNLASLENFPIGHLKTLKELNVAHNLIQSFKLPEYFSNLTNLEHL  
DLSSNKIQSIYCTDLRVLHQMPLLNLSLDLSLNPMMNFIQPGAFKEIRLHKLTLRNNFDSLNVMTKCIQGL  
AGLEVHRLVLGEFRNEGNLEKFDKSALEGLCNLTIEEFRLAYLDYYLDDIIDLFNCLTNVSSFSLVSVTI  
ERVKDFSYNFGWQHLELVNCKFGQFPTLKLKSLKRLTFTSNKGGNAFSEVDLPSLEFLDLSRNGLSFKGC  
CSQSDFGTTSKYLDFSNGVITMSSNFLGLEQLEHLDFQHSNLKQMSEFSVFLSLRNL IYLDISHHTR  
VAFNGIFNGLSSLEVLKMGNSFQENFLPDIFTELRLNLTFLDLSQCQLEQLSPTAFNSLSSLQVLNMSHN  
NFFSLDTFPYKCLNSLQVLDYSLNHIMTSKKQELQHFSSLAFLNLTQNDFACTCEHQSFQWIKDQRQL  
LVEVERMECATPSDKQGMVLSL NITCQMNKTIIGVSVLSVLVVSVVAVLVYKFFHMLLAGCIKYGRG  
ENIYDAFVIYSSQDEDWVRNELVKNLEEGVPPFQLCLHYRDFIPGVAIAANIHEGFHKS RKVIVVVSQH  
FIQSRWCIFEYEIAQTWQFLSSRAGIIFIVLQKVEKTLRQQVELYRLLSRNTYLEWEDSVLGRHIFWRR  
LRKALLDGKSWNPEGTGTGCNWQEATSI

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



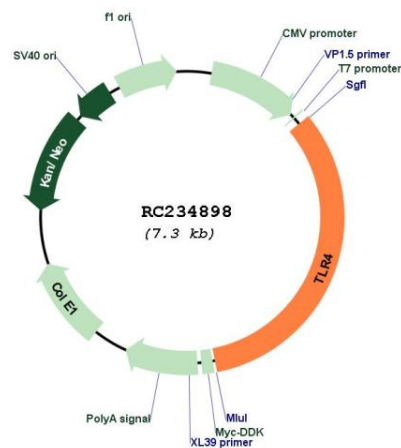
\* The last codon before the Stop codon of the ORF

ACCN: NM\_003266  
 ORF Size: 2397 bp

<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
<b>Components:</b>	<p>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).</p>
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_003266.4</a>
<b>RefSeq Size:</b>	5781 bp
<b>RefSeq ORF:</b>	2400 bp
<b>Locus ID:</b>	7099
<b>UniProt ID:</b>	<a href="#">O00206</a>
<b>Cytogenetics:</b>	9q33.1
<b>Domains:</b>	TIR, LRRCT, LRR, LRR_TYP, LRR_PS
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Pathogenic Escherichia coli infection, Toll-like receptor signaling pathway
<b>MW:</b>	91.7 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]

**Product images:**

Circular map for RC234898