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Product datasheet for SC311493

TLR4 (NM_138554) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TLR4 (NM_138554) Human Untagged Clone
Tag:	Tag Free
Symbol:	TLR4
Synonyms:	ARMD10; CD284; TLR-4; TOLL
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF sequence for NM_138554 edited
ATGTCTGCCTCGCGCCTGGCTGGGACTCTGATCCCAGCCATGGCCTTCCTCTCCTGCGTG
AGACCAGAAAGCTGGGAGCCCTGCGTGGAGGTGGTTCCTAATATTACTTATCAATGCATG
GAGCTGAATTTCTACAAAATCCCCGACAACCTCCCCTTCTCAACCAAGAACCTGGACCTG
AGCTTTAATCCCCTGAGGCATTTAGGCAGCTATAGCTTCTTCAGTTTCCCAGAACTGCAG
GTGCTGGATTTATCCAGGTGTGAAATCCAGACAATTGAAGATGGGGCATATCAGAGCCTA
AGCCACCTCTCTACCTTAATATTGACAGGAAACCCCATCCAGAGTTTAGCCCTGGGAGCC
TTTTCTGGACTATCAAGTTTACAGAAGCTGGTGGCTGTGGAGACAAATCTAGCATCTCTA
GAGAACTTCCCCATTGGACATCTCAAAACTTTGAAAGAACTTAATGTGGCTCACAATCTT
ATCCAATCTTTCAAATTACCTGAGTATTTTTCTAATCTGACCAATCTAGAGCACTTGGAC
CTTTCCAGCAACAAGATTCAAAGTATTTATTGCACAGACTTGCGGGTTCTACATCAAATG
CCCCTACTCAATCTCTCTTTAGACCTGTCCCTGAACCCTATGAACTTTATCCAACCAGGT
GCATTTAAAGAAATTAGGCTTCATAAGCTGACTTTAAGAAATAATTTTGATAGTTTAAAT
GTAATGAAAACTTGTATTCAAGGTCTGGCTGGTTTAGAAGTCCATCGTTTGGTTCTGGGA
GAATTTAGAAATGAAGGAAACTTGGAAAAGTTTGACAAATCTGCTCTAGAGGGCCTGTGC
AATTTGACCATTGAAGAATTCCGATTAGCATACTTAGACTACTACCTCGATGATATTATT
GACTTATTTAATTGTTTGACAAATGTTTCTTCATTTTCCCTGGTGAGTGTGACTATTGAA
AGGGTAAAAGACTTTTCTTATAATTTCGGATGGCAACATTTAGAATTAGTTAACTGTAAA
TTTGGACAGTTTCCCACATTGAAACTCAAATCTCTCAAAAGGCTTACTTTCACTTCCAAC
AAAGGTGGGAATGCTTTTTCAGAAGTTGATCTACCAAGCCTTGAGTTTCTAGATCTCAGT
AGAAATGGCTTGAGTTTCAAAGGTTGCTGTTCTCAAAGTGATTTTGGGACAACCAGCCTA
AAGTATTTAGATCTGAGCTTCAATGGTGTTATTACCATGAGTTCAAACTTCTTGGGCTTA
GAACAACTAGAACATCTGGATTTCCAGCATTCCAATTTGAAACAAATGAGTGAGTTTTCA
GTATTCCTATCACTCAGAAACCTCATTTACCTTGACATTTCTCATACTCACACCAGAGTT
GCTTTCAATGGCATCTTCAATGGCTTGTCCAGTCTCGAAGTCTTGAAAATGGCTGGCAAT
TCTTTCCAGGAAAACTTCCTTCCAGATATCTTCACAGAGCTGAGAAACTTGACCTTCCTG
GACCTCTCTCAGTGTCAACTGGAGCAGTTGTCTCCAACAGCATTTAACTCACTCTCCAGT
CTTCAGGTACTAAATATGAGCCACAACAACTTCTTTTCATTGGATACGTTTCCTTATAAG
TGTCTGAACTCCCTCCAGGTTCTTGATTACAGTCTCAATCACATAATGACTTCCAAAAAA
CAGGAACTACAGCATTTTCCAAGTAGTCTAGCTTTCTTAAATCTTACTCAGAATGACTTT
GCTTGTACTTGTGAACACCAGAGTTTCCTGCAATGGATCAAGGACCAGAGGCAGCTCTTG
GTGGAAGTTGAACGAATGGAATGTGCAACACCTTCAGATAAGCAGGGCATGCCTGTGCTG
AGTTTGAATATCACCTGTCAGATGAATAAGACCATCATTGGTGTGTCGGTCCTCAGTGTG
CTTGTAGTATCTGTTGTAGCAGTTCTGGTCTATAAGTTCTATTTTCACCTGATGCTTCTT
GCTGGCTGCATAAAGTATGGTAGAGGTGAAAACATCTATGATGCCTTTGTTATCTACTCA
AGCCAGGATGAGGACTGGGTAAGGAATGAGCTAGTAAAGAATTTAGAAGAAGGGGTGCCT
CCATTTCAGCTCTGCCTTCACTACAGAGACTTTATTCCCGGTGTGGCCATTGCTGCCAAC
ATCATCCATGAAGGTTTCCATAAAAGCCGAAAGGTGATTGTTGTGGTGTCCCAGCACTTC
ATCCAGAGCCGCTGGTGTATCTTTGAATATGAGATTGCTCAGACCTGGCAGTTTCTGAGC
AGTCGTGCTGGTATCATCTTCATTGTCCTGCAGAAGGTGGAGAAGACCCTGCTCAGGCAG
CAGGTGGAGCTGTACCGCCTTCTCAGCAGGAACACTTACCTGGAGTGGGAGGACAGTGTC
CTGGGGCGGCACATCTTCTGGAGACGACTCAGAAAAGCCCTGCTGGATGGTAAATCATGG
AATCCAGAAGGAACAGTGGGTACAGGATGCAATTGGCAGGAAGCAACATCTATCTGA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_138554 unedited
GCGTAGCTTTGTATACGACTCCTATAGGGCGGCCGCGAATACGGCAGCAGAGAACTGCTT
TGAATACACCAATTGCTGTGGGGCGGCTCGAGGAAGAGAAGACACCAGTGCCTCAGAAAC
TGCTCGGTCAGACGGTGATAGCGAGCCACGCATTCACAGGGCCACTGCTGCTCACAGAAG
CAGTGAGGATGATGCCAGGATGATGTCTGCCTCGCGCCTGGCTGGGACTCTGATCCCAGC
CATGGCCTTCCTCTCCTGCGTGAGACCAGAAAGCTGGGAGCCCTGCGTGGAGGTGGTTCC
TAATATTACTTATCAATGCATGGAGCTGAATTTCTACAAAATCCCCGACAACCTCCCCTT
CTCAACCAAGAACCTGGACCTGAGCTTTAATCCCCTGAGGCATTTAGGCAGCTATAGCTT
CTTCAGTTTCCCAGAACTGCAGGTGCTGGATTTATCCAGGTGTGAAATCCAGACAATTGA
AGATGGGGCATATCAGAGCCTAAGCCACCTCTCTACCTTAATATTGACAGGAAACCCCAT
CCAGAGTTTAGCCCTGGGAGCCTTTTCTGGACTATCAAGTTTACAGAAGCTGGTGGCTGT
GGAGACAAATCTAGCATCTCTAGAGAACTTCCCCATTGGACATCTCAAAACTTTGAAAGA
ACTTAATGTGGCTCACAATCTTATCCAATCTTTCAAATTACCTGAGTATTTTTCTAATCT
GACCAATCTAGAGCACTTGGACCTTTCCAGCAACAAGATTCAAGTATTTATTGCACAGAC
TTGCGGGTTCTACATCAATGCCCCTACTCAATCTCTCTTTAGACCTGTCCCTGACCCTAT
GACTTTATCACCAGTGCATTTAAGAATTAGCTTCATAGCTGACTTAGAATAATTTGATAG
TTAAATGTAATGAAACTTGTATTCAAGGTCTGGCTGATA

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_138554 unedited
CGCGATGCACCTTCAGGGCCGGAGAGCACTGGGGAGGGGTCACAGGGATGCCACCCGGGA
TCTGTTCAGGAAACAGCTATGACCGCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTT
TTTTTAACTTTTATTACAATATATTATTATAACTATTCAATTTTATTGTTAGTTATTGTT
AATCTCTTACTGTGCCTAATTCAGAAGATGAACTTTATCTTAGGTATTTATGTATAGGAA
AAAATATTGCATATATGAGGTTTGGTACCATCTGCGGTCTCAGAGATCCACTTGGGGTCT
AAGAACGTATCCACCAAGCATAAGGGATAAGGGGAGACTACTGTACAAGCACAAGAGTAG
AGAACTCATCTCAAACAGCCATAGACATCCATTTCAAATGGATGTATTCTTCAAGAAATA
TAATCACACTCTCTTCTATACAGATATGATCATGCGGACACACACACTTTCAAATACACA
CAGCCCTGATAGGGATACATAGGGATATGTGCACAAATGCACACATCTACTTTCACTAGT
ACATGAGACATGGAAAACACACCCAGGGATGTTCAATCACCCTAGACCTGCTCAAACCAA
ACACACTCTGAAACACTCAGTAACAAACACTTCTGACTGTGGTCATATTTCCAGTTTTGA
CAACTGAATTTTGTTGTCTTTTCTTTTTTATAGCTTCATTCAGACATAATTGATATTATA
AAACTGCATATATTTAATGTATACAATTTGATGAGTTTAGACATAGTCACATACCTGTCA
AACCATCACCCACATCAAGTAATAAATATATCCATCACCTCCAAAGCTCTTGTGTATATT
GTAATATGTAAGAACACTACATGAAGTACCTCTAACAATGTAGTGCATAATACAGTATGT
TCATTATACGAACCTCTGCTATACAGCTGATCTTTAAAGCTA

Restriction Sites: Please inquire

ACCN: NM_138554

Insert Size: 6000 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:	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
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_138554.2, NP_612564.1
RefSeq Size:	5503 bp
RefSeq ORF:	2520 bp
Locus ID:	7099
UniProt ID:	O00206
Cytogenetics:	9q33.1
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Pathogenic Escherichia coli infection, Toll-like receptor signaling pathway

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]
Transcript Variant: This variant (1) encodes the longest isoform (A).