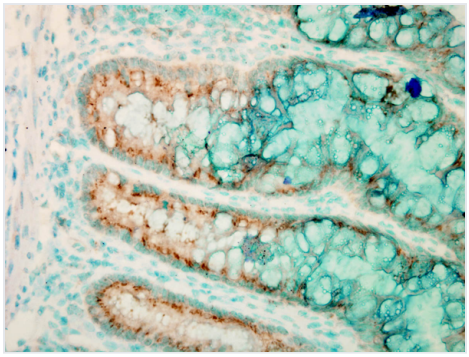
TLR4 Antibody – Rabbit Polyclonal

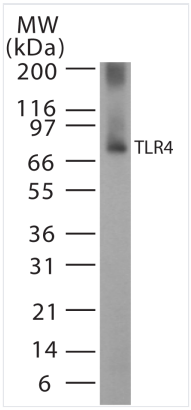
PRODUCT OVERVIEW

Product Name	TLR4, Polyclonal Antibody
Full Product Name	TLR4 Antibody: ATTO 488
Product Gene Name	anti-TLR4 antibody
Product Synonym Names	ARMD10; CD284; TLR 4; TOLL; Toll like receptor 4
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Affinity Purified
Concentration	1mg/mL (lot specific)
Preparation and Storage	-20 degree C
Matching Pairs	Unconjugated Antibody: N/A (MBS805611) ATTO 488 Conjugated Antibody: TLR4 (MBS805611)
Matching Pairs	Unconjugated Antibody: TLR4 (MBS805758) ATTO 488 Conjugated Antibody: TLR4 (MBS805611)
Molecular Weight	73,301 Da
OMIM	gene+611488
3D Structure	ModBase 3D Structure for O00206
Conjugate	ATTO 488
Storage Buffer	PBS, 0.05% BSA, 0.05% sodium azide
Product Categories/Family for anti-TLR4 antibody	Cell Signaling; Organelle Markers
Applications Tested/Suitable for anti-TLR4 antibody	Flow Cytometry (FC/FACS), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Western Blot (WB)
Application Notes for anti-TLR4 antibody	1-3ug/mL (WB), 1:50 (IHC)
Related Product Information for anti-TLR4 antibody	**Background Info:** Detects ~75-80kDa when tested against partial recombinant mouse TLR4 (extra-cellular portion plus His-tag). **Scientific Background:** The Toll-like receptor (TLR) family in mammal comprises a family of trans-membrane proteins characterized by multiple copies of leucine rich repeats in the extracellular domain and 1L-1 receptor motif in the cytoplasmic domain. Like its counterparts in Drosophila, TLRs signal through adaptor molecules (1). The TLR family is a phylo-genetically conserved mediator of innate immunity that is essential for microbial recognition (2). Ten human homologs of TLRs (TLR1-10) have been described (3). Amount this family of receptors, TLR2 and TLR4 have been most studied. These studies have suggested that TLR2 and TLR4 may serve as potential main mediators of LPS signaling (4,5). The mouse TLR4 cDNA codes for a protein consisting of 839 amino acids, with an approximate molecular weight of 90kDa (6).

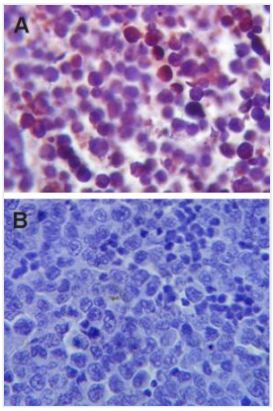
Product References and Citations for anti-TLR4 antibody	1.JMuzio M., Natoli G., Saccan S., Levrero M., and Mantovani A. (1998) J. Exp. Med. 187: 2097-2101. 2. Medzhitov R. and Janeway C.A (1997). Cell 91: 295-298. 3. Chuang T.H. and Ulevitch R.J. (2001) Biochim. Biophys. Acta 1518 (1-2): 157-161). 4. Takeuchi O., et al. (1999) Immunity 11: 443. 5. Poltorak A., Riccardi-Castagnoli P., Citterio S., and Butler B. (2000) Proc. Natl. Acad. Sci USA 97: 2163-2167. 6. Medzhitov R., Preston-Hurlburt P. and Janeway C.A. (1997) Jr. Nature 388 (6640): 394-397.
Other Notes	Small volumes of anti-TLR4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for TLR4 purchase	MBS805611 is an antibody targeting TLR4. Also known as TLR4 Antibody: ATTO 488. Reactive in Human, Mouse. Host: Rabbit.



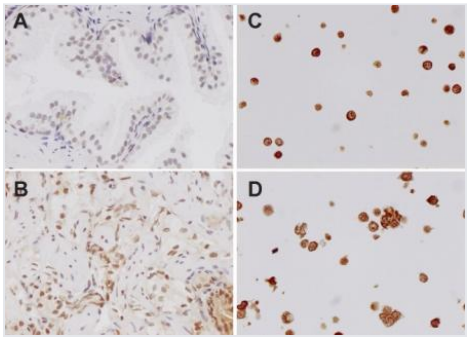
Immunohistochemistry (IHC) of anti-TLR4 antibody
Immunohistochemistry analysis using Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200). Tissue: colon colitis. Species: Mouse. Fixation: Formalin. Primary Antibody: Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200) at 1:100000 for 12 hours at 4 degree C. Secondary Antibody: Biotin Goat Anti-Rabbit at 1:2000 for 1 hour at RT. Counterstain: Methyl Green at 200uL for 2 min at RT. Localization: Inflammatory cells.



Western Blot (WB) of anti-TLR4 antibody
Western blot analysis of Human, Mouse Cell line lysates showing detection of TLR4 protein using Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200). Primary Antibody: Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200) at 1:1000.



Immunohistochemistry (IHC) of anti-TLR4 antibody
Immunohistochemistry analysis using Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200). Tissue: Spleen tissue. Species: Mouse. Primary Antibody: Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200) at 1:100.



Immunohistochemistry (IHC) of anti-TLR4 antibody
Immunohistochemistry analysis using Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200). Tissue: spleen tissue. Species: Mouse. Primary Antibody: Rabbit Anti-TLR4 Polyclonal Antibody (SPC-200) at 1:100.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TLR4. It may not necessarily be applicable to this product.

NCBI GI #	19924149
NCBI GeneID	7099
NCBI Accession #	NP_612564.1
UniProt Primary Accession #	O00206
UniProt Secondary Accession #	Q5VZI8; Q5VZI9; Q9UK78; Q9UM57; A8K1Y8; A9XLP9; A9XLQ0; A9XLQ1; B4E194; D1CS52; D1CS53
UniProt Related Accession #	O00206

GenBank Nucleotide #	NM_138554.4
NCBI Official Full Name	toll-like receptor 4 isoform A
NCBI Official Synonym Full Names	toll-like receptor 4
NCBI Official Symbol	TLR4
NCBI Official Synonym Symbols	TOLL; CD284; TLR-4; ARMD10
UniProt Protein Name	Toll-like receptor 4
UniProt Synonym Protein Names	hToll; CD_antigen: CD284
Protein Family	Toll-like receptor
UniProt Gene Name	TLR4
UniProt Entry Name	TLR4_HUMAN
NCBI Protein Information	toll-like receptor 4; hToll; homolog of Drosophila toll
NCBI Summary for TLR4	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. This receptor has 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. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2012]

UniProt Comments for TLR4	TLR4: Cooperates with LY96 and CD14 to mediate the innate immune response to bacterial lipopolysaccharide (LPS). Acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. Also involved in LPS- independent inflammatory responses triggered by Ni(2+). These responses require non-conserved histidines and are, therefore, species-specific. Belongs to the lipopolysaccharide (LPS) receptor, a multi-protein complex containing at least CD14, LY96 and TLR4. Binding to bacterial LPS leads to homodimerization. Interacts with LY96 via the extracellular domain. Interacts with MYD88 and TIRAP via their respective TIR domains. Interacts with NOX4. Interacts with CNPY3. Interacts with HSP90B1. The interaction with both CNPY3 and HSP90B1 is required for proper folding in the endoplasmic reticulum. Highly expressed in placenta, spleen and peripheral blood leukocytes. Detected in monocytes, macrophages, dendritic cells and several types of T-cells. Belongs to the Toll-like receptor family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Receptor, misc. Chromosomal Location of Human Ortholog: 9q33.1 Cellular Component: integral to plasma membrane; perinuclear region of cytoplasm; cytoplasm; plasma membrane; lipopolysaccharide receptor complex; endosome membrane; external side of plasma membrane Molecular Function: protein binding; transmembrane receptor activity; lipopolysaccharide binding; lipopolysaccharide receptor activity; receptor activity Biological Process: I-kappaB kinase/NF-kappaB cascade; positive regulation of nitric oxide biosynthetic process; activation of MAPK activity; response to lipopolysaccharide; positive regulation of NF-kappaB import into nucleus; toll-like receptor 3 signaling pathway; positive regulation of interleukin-10 production; activation of NF-kappaB transcription factor; negative regulation of interleukin-6 production; positive regulation of interferon-beta production; positive regulation of B cell proliferation; toll-like receptor 4 signaling pathway; positive regulation of interferon-alpha production; T-helper 1 type immune response; production of nitric oxide during acute inflammatory response; positive regulation of interleukin-8 biosynthetic process; positive regulation of interleukin-6 production; positive regulation of tumor necrosis factor production; positive regulation of chemokine production; toll-like receptor 2 signaling pathway; macrophage activation; negative regulation of interleukin-23 production; detection of lipopolysaccharide; defense response to bacterium; positive regulation of transcription from RNA polymerase II promoter; I-kappaB phosphorylation; positive regulation of nitric-oxide synthase biosynthetic process; negative regulation of osteoclast differentiation; regulation of cytokine secretion; positive regulation of interleukin-12 production; positive regulation of JNK cascade; defense response to Gram-negative bacterium; positive regulation of interleukin-8 production; positive regulation of MHC class II biosynthetic process; negative regulation of interferon-gamma production; interferon-gamma production; lipopolysaccharide-mediated signaling pathway; B cell proliferation during immune response; positive regulation of tumor necrosis factor biosynthetic process; detection of fungus; MyD88-independent toll-like receptor signaling pathway; negative regulation of tumor necrosis factor production; MyD88-dependent toll-like receptor signaling pathway; positive regulation of interferon-gamma production; negative regulation of interleukin-17 production; positive regulation of interleukin-12 biosynthetic process; positive regulation of interferon-beta biosynthetic process; toll-like receptor signaling pathway; innate immune response; immune response; positive regulation of interleukin-1 production; positive regulation of inflammatory response Disease: Macular Degeneration, Age-related, 10
Research Articles on TLR4	**1.** An inflammatory environment and/or Toll-like receptor (TLR) ligation could affect the mesenchymal stromal cell differentiation potential.
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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