

TLR4 (M-300): sc-30002

BACKGROUND

Six human homologs of the *Drosophila* toll receptor were initially identified based on their sequence similarities and designated toll-like receptors (TLR). toll receptors are involved in mediating dorsoventral polarization in the developing *Drosophila* embryo and also participate in the host immunity. The TLR family of proteins are characterized by a highly conserved toll homology (TH) domain, which is essential for toll-induced signal transduction. TLR1, as well as the other TLR family members, are type I transmembrane receptors that characteristically contain an extracellular domain consisting of several leucine-rich regions along with a single cytoplasmic toll/IL-1R-like domain. TLR2 and TLR4 are activated in response to lipopolysacchride (LPS) stimulation, which results in the activation and translocation of NFκB and suggests that these receptors are involved in mediating inflammatory responses. Expression of TLR receptors is highest in peripheral blood leukocytes, macro-phages and monocytes. TLR6 is highly homologous to TLR1, sharing greater than 65% sequence identity; like other members of TLR family, it induces NFκB signaling upon activation.

CHROMOSOMAL LOCATION

Genetic locus: TLR4 (human) mapping to 9q33.1; Tlr4 (mouse) mapping to 4 C1.

SOURCE

TLR4 (M-300) is a rabbit polyclonal antibody raised against amino acids 339-638 mapping within an N-terminal extracellular domain of TLR4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TLR4 (M-300) is recommended for detection of TLR4 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TLR4 siRNA (h): sc-40260, TLR4 siRNA (m): sc-40261, TLR4 siRNA (r): sc-156001, TLR4 shRNA Plasmid (h): sc-40260-SH, TLR4 shRNA Plasmid (m): sc-40261-SH, TLR4 shRNA Plasmid (r): sc-156001-SH, TLR4 shRNA (h) Lentiviral Particles: sc-40260-V, TLR4 shRNA (m) Lentiviral Particles: sc-40261-V and TLR4 shRNA (r) Lentiviral Particles: sc-156001-V.

Molecular Weight of glycosylated TLR4: 95/120 kDa.

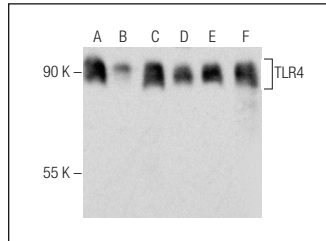
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



TLR4 (M-300): sc-30002. Western blot analysis of TLR4 expression in Jurkat (A), HEL 92.1.7 (B), HL-60 (C), AML-193 (D), CCRF-CEM (E) and JAR (F) whole cell lysates.

SELECT PRODUCT CITATIONS

- Mortaz, E., et al. 2007. Stimulation of cysteinyl leukotriene production in mast cells by heat shock and acetylsalicylic acid. *Eur. J. Pharmacol.* 561: 214-219.
- Tu, X.K., et al. 2010. Spatio-temporal distribution of inflammatory reaction and expression of TLR2/4 signaling pathway in rat brain following permanent focal cerebral ischemia. *Neurochem. Res.* 35: 1147-1155.
- Hanson, P.J., et al. 2010. Paracellular permeability is increased by basal lipopolysaccharide in a primary culture of colonic epithelial cells; an effect prevented by an activator of Toll-like receptor-2. *Innate Immun.* 17: 269-282.
- Campo, G.M., et al. 2011. Hyaluronan reduces inflammation in experimental arthritis by modulating TLR-2 and TLR-4 cartilage expression. *Biochim. Biophys. Acta* 1812: 1170-1181.
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- Caricilli, A.M., et al. 2011. Gut microbiota is a key modulator of Insulin resistance in TLR 2 knockout mice. *PLoS Biol.* 9: e1001212.
- Jiménez-Castro, M.B., et al. 2012. Tauroursodeoxycholic acid affects PPAR and TLR4 in steatotic liver transplantation. *Am. J. Transplant.* 12: 3257-3271.
- Bonior, J., et al. 2012. Long-lasting effect of infant rats endotoxemia on heat shock protein 60 in the pancreatic acinar cells: involvement of toll-like receptor 4. *Int. J. Inflam.* 2012: 354904.


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