

TLR4 (L-14): sc-16240

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 lipopolysaccharide (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, and, like other members of TLR family, it induces NFκB signaling upon activation.

CHROMOSOMAL LOCATION

Genetic locus: Tlr4 (mouse) mapping to 4 C1.

SOURCE

TLR4 (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TLR4 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16240 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TLR4 (L-14) is recommended for detection of TLR4 of mouse and rat 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 (m): sc-40261, TLR4 siRNA (r): sc-156001, TLR4 shRNA Plasmid (m): sc-40261-SH, TLR4 shRNA Plasmid (r): sc-156001-SH, 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.

Positive Controls: mouse PBL whole cell lysate.

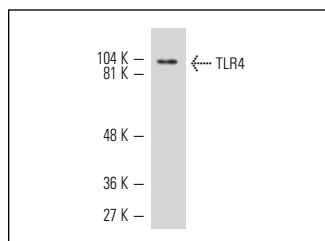
STORAGE

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 (L-14): sc-16240. Western blot analysis of TLR4 expression in mouse PBL whole cell lysate.

SELECT PRODUCT CITATIONS

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- Li, M., et al. 2010. The effect of PACAP38 on MyD88-mediated signal transduction in ischemia/hypoxia-induced acute kidney injury. *Am. J. Nephrol.* 32: 522-532.
- Motojima, M., et al. 2010. Fibrinogen that appears in Bowman's space of proteinuric kidneys *in vivo* activates podocyte Toll-like receptors 2 and 4 *in vitro*. *Nephron Exp. Nephrol.* 114: e39-e47.
- Yuan, X., et al. 2010. Toll-like receptors involved in the pathogenesis of experimental *Candida albicans* keratitis. *Invest. Ophthalmol. Vis. Sci.* 51: 2094-2100.
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- Shih, R.H., et al. 2010. Induction of heme oxygenase-1 attenuates lipopolysaccharide-induced cyclooxygenase-2 expression in mouse brain endothelial cells. *J. Neuroinflammation* 7: 86.
- Alfonso-Loeches, S., et al. 2010. Pivotal role of TLR4 receptors in alcohol-induced neuroinflammation and brain damage. *J. Neurosci.* 30: 8285-8295.
- Zhang, J.L., et al. 2013. Propofol inhibits hypoxia/reoxygenation-induced human gastric epithelial cell injury by suppressing the Toll-like receptor 4 pathway. *Kaohsiung J. Med. Sci.* 29: 289-298.



Try **TLR4 (25): sc-293072**, our highly recommended monoclonal alternative to TLR4 (L-14). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **TLR4 (25): sc-293072**.