

# TLR2 (1F10): sc-53925

## 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 NF $\kappa$ B and suggests that these receptors are involved in mediating inflammatory responses. Expression of TLR receptors is highest in peripheral blood leukocytes, macrophages and monocytes. TLR6 is highly homologous to TLR1, sharing greater than 65% sequence identity, and, like other members of the TLR family, it induces NF $\kappa$ B signaling upon activation.

## REFERENCES

1. Gay, N.J., et al. 1991. *Drosophila* Toll and IL-1 receptor. *Nature* 351: 355-356.
2. Medzhitov, R., et al. 1997. A human homolog of the *Drosophila* Toll protein signals activation of adaptive immunity. *Nature* 388: 394-397.
3. Rock, F.L., et al. 1998. A family of human receptors structurally related to *Drosophila* Toll. *Proc. Natl. Acad. Sci. USA* 95: 588-593.
4. Yang, R.B., et al. 1998. TLR2 mediates lipopolysaccharide-induced cellular signaling. *Nature* 395: 284-288.
5. Brightbill, H.D., et al. 1999. Host defense mechanisms triggered by microbial lipoproteins through TLRs. *Science* 285: 732-736.
6. Chow, J.C., et al. 1999. TLR4 mediates lipopolysaccharide-induced signal transduction. *J. Biol. Chem.* 274: 10689-10692.
7. Schwandner, R., et al. 1999. Peptidoglycan and lipoteichoic acid-induced cell activation is mediated by TLR2. *J. Biol. Chem.* 274: 17406-17409.
8. Takeuchi, O., et al. 1999. TLR6: a novel member of an expanding Toll-like receptor family. *Gene* 231: 59-65.

## CHROMOSOMAL LOCATION

Genetic locus: TLR2 (human) mapping to 4q31.3.

## SOURCE

TLR2 (1F10) is a mouse monoclonal antibody raised against amino acids 221-384 of TLR2 of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

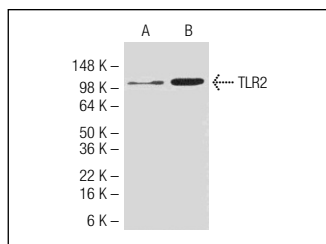
TLR2 (1F10) is recommended for detection of TLR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for TLR2 siRNA (h): sc-40256, TLR2 shRNA Plasmid (h): sc-40256-SH and TLR2 shRNA (h) Lentiviral Particles: sc-40256-V.

Molecular Weight of TLR2: 90-100 kDa.

Positive Controls: Ramos cell lysate: sc-2216, A549 cell lysate: sc-2413 or Caco-2 cell lysate: sc-2262.

## DATA



TLR2 (1F10): sc-53925. Western blot analysis of TLR2 expression in Ramos (A) and A549 (B) whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **TLR2 (TL2.1): sc-21759** for TLR2 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.