

## TLR1 (N-20): sc-8687

### 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, is a type I transmembrane receptor that characteristically contains 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 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 homologue 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. Brightbill, H.D., et al. 1999. Host defense mechanisms triggered by microbial lipoproteins through toll-like receptors. *Science* 285: 732-736.

### CHROMOSOMAL LOCATION

Genetic locus: TLR1 (human) mapping to 4p14.

### SOURCE

TLR1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TLR1 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8687 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### PROTOCOLS

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

### APPLICATIONS

TLR1 (N-20) is recommended for detection of TLR1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 TLR1 siRNA (h): sc-40254, TLR1 shRNA Plasmid (h): sc-40254-SH and TLR1 shRNA (h) Lentiviral Particles: sc-40254-V.

Molecular Weight of TLR1: 90 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### SELECT PRODUCT CITATIONS

1. Dissanayake, S., et al. 2004. *Taenia crassiceps* carbohydrates stimulate IL-6 expression in naïve murine macrophages via toll-like receptors (TLRs). *Mol. Immunol.* 41: 391-398.
2. Dissanayake, S., et al. 2007. Induction of interferon- $\gamma$  by *Taenia crassiceps* glycans and Lewis sugars in naïve BALB/c spleen and peritoneal exudate cells. *Mol. Immunol.* 44: 1623-1630.
3. Begon, E., et al. 2007. Expression, subcellular localization and cytokinin modulation of toll-like receptors (TLRs) in normal human keratinocytes: TLR2 up-regulation in psoriatic skin. *Eur. J. Dermatol.* 17: 497-506.
4. Zhou, M., et al. 2009. Toll-like receptor expression in normal ovary and ovarian tumors. *Cancer Immunol. Immunother.* 58: 1375-1385.
5. Aboussahoud, W., et al. 2010. Expression and function of Toll-like receptors in human endometrial epithelial cell lines. *J. Reprod. Immunol.* 84: 41-51.

### RESEARCH USE

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


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 Satisfaction  
 Guaranteed

Try **TLR1 (H-8): sc-514399**, our highly recommended monoclonal alternative to TLR1 (N-20).