SANTA CRUZ BIOTECHNOLOGY, INC.

# TLR1 (H-8): sc-514399

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 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, macrophages 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.

## 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. Yang, R.B., et al. 1998. Toll-like receptor-2 mediates lipopolysaccharide-induced cellular signalling. Nature 395: 284-288.
5. 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; Tlr1 (mouse) mapping to 5 C3.1.

## SOURCE

TLR1 (H-8) is a mouse monoclonal antibody raised against amino acids 161-250 mapping within an N-terminal extracellular domain of TLR1 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TLR1 (H-8) is available conjugated to agarose (sc-514399 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514399 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514399 PE), fluorescein (sc-514399 FITC), Alexa Fluor® 488 (sc-514399 AF488), Alexa Fluor® 546 (sc-514399 AF546), Alexa Fluor® 594 (sc-514399 AF594) or Alexa Fluor® 647 (sc-514399 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514399 AF680) or Alexa Fluor® 790 (sc-514399 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

TLR1 (H-8) is recommended for detection of TLR1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 TLR1 siRNA (h): sc-40254, TLR1 siRNA (m): sc-40255, TLR1 shRNA Plasmid (h): sc-40254-SH, TLR1 shRNA Plasmid (m): sc-40255-SH, TLR1 shRNA (h) Lentiviral Particles: sc-40254-V and TLR1 shRNA (m) Lentiviral Particles: sc-40255-V.

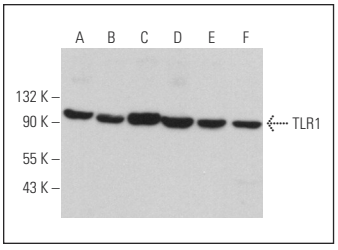
Molecular Weight of TLR1: 90 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Ramos cell lysate: sc-2216 or RAW 264.7 whole cell lysate: sc-2211.

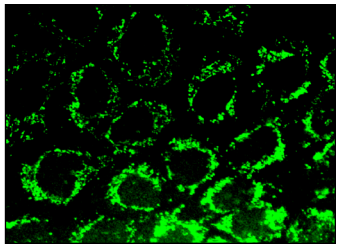
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




TLR1 (H-8): sc-514399. Western blot analysis of TLR1 expression in RAW 264.7 (**A**), PC-12 (**B**), NIH/3T3 (**C**), Ramos (**D**), HeLa (**E**) and Jurkat (**F**) whole cell lysates.



TLR1 (H-8): sc-514399. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic vesicles localization.

## 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 for detailed protocols and support products.