SANTA CRUZ BIOTECHNOLOGY, INC.

TLR5 (85B152.5): sc-52963

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, 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. TLR5 specifically participates in the innate immune response to microbial agents. TLR5 is highly expressed in ovary and in peripheral blood leukocytes, most abundantly in monocytes and, to a lesser extent, in prostate and testis.

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.
6. Chow, J.C., et al. 1999. Toll-like receptor-4 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 Toll-like receptor 2. 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: TLR5 (human) mapping to 1q41; Tlr5 (mouse) mapping to 1 H5.

SOURCE

TLR5 (85B152.5) is a mouse monoclonal antibody raised against synthetic TLR5 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TLR5 (85B152.5) is recommended for detection of TLR5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and flow cytometry (1 µg per 1 x 10^6 cells).

TLR5 (85B152.5) is also recommended for detection of TLR5 in additional species, including canine.

Suitable for use as control antibody for TLR5 siRNA (h): sc-40262, TLR5 siRNA (m): sc-40263, TLR5 shRNA Plasmid (h): sc-40262-SH, TLR5 shRNA Plasmid (m): sc-40263-SH, TLR5 shRNA (h) Lentiviral Particles: sc-40262-V and TLR5 shRNA (m) Lentiviral Particles: sc-40263-V.

Molecular Weight of TLR5: 110-120 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, NAMALWA cell lysate: sc-2234 or HL-60 whole cell lysate: sc-2209.

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.