SANTA CRUZ BIOTECHNOLOGY, INC.

TLR2 (T2.5): sc-52736

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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. 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. TLR2 mediates lipopolysaccharide-induced cellular signalling. 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 TLR family. Gene 231: 59-65.

CHROMOSOMAL LOCATION

Genetic locus: TLR2 (human) mapping to 4q31.3; Tlr2 (mouse) mapping to 3 E3.

SOURCE

TLR2 (T2.5) is a mouse monoclonal antibody raised against the extracellular domain of TLR2 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as fluorescein conjugate for flow cytometry, sc-52736 FITC, 100 tests.

APPLICATIONS

TLR2 (T2.5) is recommended for detection of TLR2 of mouse and human origin by 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 flow cytometry (1 µg per 1 x 10^6 cells).

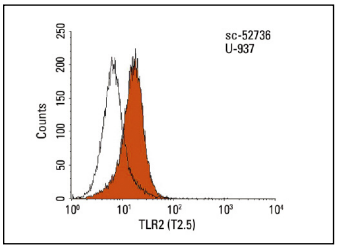
Suitable for use as control antibody for TLR2 siRNA (h): sc-40256, TLR2 siRNA (m): sc-40257, TLR2 shRNA Plasmid (h): sc-40256-SH, TLR2 shRNA Plasmid (m): sc-40257-SH, TLR2 shRNA (h) Lentiviral Particles: sc-40256-V, TLR2 shRNA (m) Lentiviral Particles: sc-40257-V.

Molecular Weight of TLR2: 90-100 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TLR2 (T2.5): sc-52736. Indirect FCM analysis of U-937 cells stained with TLR2 (T2.5), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG_1: sc-3877.

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 or our catalog for detailed protocols and support products.