SANTA CRUZ BIOTECHNOLOGY, INC.

TLR2 (4H265): sc-73181

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 that consists 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 the 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.
6. Chow, J.C., et al. 1999. Toll-like receptor 4 mediates lipopolysaccharide-induced signal transduction. J. Biol. Chem. 274: 10689-10692.
7. Takeuchi, O., et al. 1999. TLR6: a novel member of an expanding Toll-like receptor family. Gene 231: 59-65.
8. 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.

CHROMOSOMAL LOCATION

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

SOURCE

TLR2 (4H265) is a mouse monoclonal antibody raised against the extracellular domain of TLR2 of human origin.

PRODUCT

Each vial contains 100 µl ascites containing IgG_1 with < 0.1% sodium azide.

APPLICATIONS

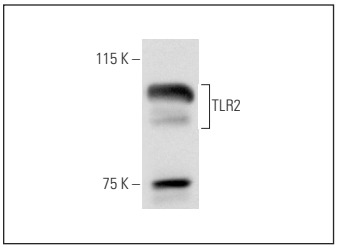
TLR2 (4H265) is recommended for detection of TLR2 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1-2 µl per 1 x 10^6 cells).

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: Caco-2 cell lysate: sc-2262, U-937 cell lysate: sc-2239 or THP-1 cell lysate: sc-2238.

DATA



TLR2 (4H265): sc-73181. Western blot analysis of TLR2 expression in THP-1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Luangsay, S., et al. 2015. Expression and functionality of Toll- and RIG-like receptors in HepaRG cells. J. Hepatol. 63: 1077-1085.
2. Zhang, Y.G., et al. 2019. Intestinal epithelial HMGB1 inhibits bacterial infection via Stat3 regulation of autophagy. Autophagy. E-published.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.

CONJUGATES

See **TLR2 (TL2.1): sc-21759** for TLR2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.