SANTA CRUZ BIOTECHNOLOGY, INC.

TLR2 (D-17): sc-12504

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. Expression of TLR receptors is highest in peripheral blood leukocytes, macro-phages, 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.

CHROMOSOMAL LOCATION

Genetic locus: Tlr2 (mouse) mapping to 3 E3.

SOURCE

TLR2 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TLR2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12504 P, (100 µg 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.

APPLICATIONS

TLR2 (D-17) is recommended for detection of TLR2 of mouse and rat 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 TLR2 siRNA (m): sc-40257, TLR2 shRNA Plasmid (m): sc-40257-SH and TLR2 shRNA (m) Lentiviral Particles: sc-40257-V.

Molecular Weight of TLR2: 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. Choda, Y., et al. 2004. Failure of the gut barrier system enhances liver injury in rats: protection of hepatocytes by gut-derived hepatocyte growth factor. Eur. J. Gastroenterol. Hepatol. 16: 1017-1025.
2. 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.
3. Mackern-Oberti, J.P., et al. 2006. Susceptibility of prostate epithelial cells to *Chlamydia muridarum* infection and their role in innate immunity by recruitment of intracellular toll-like receptors 4 and 2 and MyD88 to the inclusion. Infect. Immun. 74: 6973-6981.
4. Gatti, G., et al. 2006. Prostate epithelial cells can act as early sensors of infection by up-regulating TLR4 expression and proinflammatory mediators upon LPS stimulation. J. Leukoc. Biol. 79: 989-998.
5. Edelman, D.A., et al. 2006. Toll-like receptor-4 message is up-regulated in lipopolysaccharide-exposed rat lung pericytes. J. Surg. Res. 134: 22-27.
6. Dissanayake, S., et al. 2007. Induction of interferon-γ by *Taenia crassiceps* glycans and Lewis sugars in naive BALB/c spleen and peritoneal exudate cells. Mol. Immunol. 44: 1623-1630.
7. Liu, Y., et al. 2009. Changes in intestinal Toll-like receptors and cytokines precede histological injury in a rat model of necrotizing enterocolitis. Am. J. Physiol. Gastrointest. Liver Physiol. 297: G442-G450.
8. Letiembre, M., et al. 2009. Screening of innate immune receptors in neurodegenerative diseases: a similar pattern. Neurobiol. Aging 30: 759-768.
9. Yuan, X., et al. 2010. Toll-like receptors involved in the pathogenesis of experimental Candida albicans keratitis. Invest. Ophthalmol. Vis. Sci. 51: 2094-2100.
10. Good, D.W., et al. 2010. Toll-like receptor 2 mediates inhibition of HCO_3^- absorption by bacterial lipoprotein in medullary thick ascending limb. Am. J. Physiol. Renal Physiol. 299: F536-F544.
11. Yasuda, Y., et al. 2010. Microbial exposure early in life regulates airway inflammation in mice after infection with *Streptococcus pneumoniae* with enhancement of local resistance. Am. J. Physiol. Lung Cell. Mol. Physiol. 298: L67-L78.

RESEARCH USE

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