SANTA CRUZ BIOTECHNOLOGY, INC.

TLR9 (D-18): sc-16247

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The Power to Question

BACKGROUND

The toll-like receptors (TLR) are a family of human receptors that share homology with the *Drosophila* toll receptors, which are involved in mediating dorsoventral polarization in developing *Drosophila* embryos and participate in host immunity. The TLR family members are characterized by a highly conserved toll homology (TH) domain, which is essential for toll-induced signal transductions. TLRs are type I transmembrane receptors that contain an extracellular domain consisting of several leucine-rich regions and a single cytoplasmic Toll/IL-1R like domain. Three TLR family members, TLR7, TLR8 and TLR9, belong to a subfamily of TLRs which are differentially expressed. TLR7 is expressed in lung, placenta and spleen. TLR8 is expressed in lung and peripheral blood leukocytes, and TLR9 is predominantly expressed in spleen, lymph nodes, bone marrow and peripheral blood leukocytes. TLR7, TLR8 and TLR9 stimulate the NFκB signaling pathway, suggesting that they play a role in the immune response.

REFERENCES

1. Gay, N.J., et al. 1991. *Drosophila* toll and IL-1 receptor. Nature 351: 355-356.
2. Rock, F.L., et al. 1998. A family of human receptors structurally related to *Drosophila* toll. Proc. Natl. Acad. Sci. USA 95: 588-593.

CHROMOSOMAL LOCATION

Genetic locus: TLR9 (human) mapping to 3p21.2.

SOURCE

TLR9 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TLR9 of human 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-16247 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TLR9 (D-18) is recommended for detection of TLR9 of human 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).

TLR9 (D-18) is also recommended for detection of TLR9 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TLR9 siRNA (h): sc-40270, TLR9 shRNA Plasmid (h): sc-40270-SH and TLR9 shRNA (h) Lentiviral Particles: sc-40270-V.

Molecular Weight of TLR9: 113 kDa.

Molecular Weight of glycosylated TLR9: 160 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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. Chang, Y.J., et al. 2004. Induction of cyclooxygenase-2 overexpression in human gastric epithelial cells by *Helicobacter pylori* involves TLR2/TLR9 and c-Src-dependent nuclear factor-κB activation. Mol. Pharmacol. 66: 1465-1477.
2. Bonini, S., et al. 2005. Expression of Toll-like receptors in healthy and allergic conjunctiva. Ophthalmology 122: 1528.
3. Damas, J.K., et al. 2006. Increased levels of soluble CD40L in African tick bite fever: possible involvement of TLRs in the pathogenic interaction between *Rickettsia africae,* endothelial cells, and platelets. J. Immunol. 177: 2699-2706.
4. Hoene, V., et al. 2006. Human monocyte-derived dendritic cells express TLR9 and react directly to the CpG-A oligonucleotide D19. J. Leukoc. Biol. 80: 1328-1336.
5. Micera, A., et al. 2009. Nerve growth factor modulates toll-like receptor (TLR) 4 and 9 expression in cultured primary VKC conjunctival epithelial cells. Mol. Vis. 15: 2037-2044.
6. Zheng, L., et al. 2010. Expression of Toll-like receptors 7, 8, and 9 in primary Sjögren's syndrome. Oral Surg. Oral Med. Oral Pathol. Oral Radiol. Endod. 109: 844-850.
7. Kim, G.T., et al. 2010. Expression of TLR2, TLR4, and TLR9 in dermatomyositis and polymyositis. Clin. Rheumatol. 29: 273-279.

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.