

TLR7 (H-20): sc-13208

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 NF κ B signaling pathway, suggesting that they play a role in the immune response.

REFERENCES

1. Gay, N.J. and Keith, F.J. 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.
3. Brightbill, H.D., et al. 1999. Host defense mechanisms triggered by microbial lipoproteins through toll-like receptors. Science 285: 732-736.
4. Medzhitov, R., et al. 2000. A human homologue of the *Drosophila* toll protein signals activation of adaptive immunity. Nature 388: 394-397.
5. Chuang, T.H. and Ulevitch R.J. 2000. Cloning and characterization of a sub-family of human toll-like receptors: hTLR7, hTLR8, hTLR9. Eur. Cytokine Netw. 11: 372-378.
6. Du, X., et al. 2000. Three novel mammalian toll-like receptors: gene structure, expression, and evolution. Eur. Cytokine Netw. 11: 362-371.

CHROMOSOMAL LOCATION

Genetic locus: TLR7 (human) mapping to Xp22.2.

SOURCE

TLR7 (H-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TLR7 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-13208 P, (100 μ g 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

TLR7 (H-20) is recommended for detection of TLR7 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).

TLR7 (H-20) is also recommended for detection of TLR7 in additional species, including canine and bovine.

Suitable for use as control antibody for TLR7 siRNA (h): sc-40266, TLR7 shRNA Plasmid (h): sc-40266-SH and TLR7 shRNA (h) Lentiviral Particles: sc-40266-V.

Molecular Weight of TLR7: 120.9 kDa.

Positive Controls: Ramos cell lysate: sc-2216.

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.

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.



Try **TLR7 (4F4): sc-57463**, our highly recommended monoclonal alternative to TLR7 (H-20).