

TLR3 (H-125): sc-10740

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. Expression of TLR receptors is highest in peripheral blood leukocytes, macrophages and monocytes. 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 lipopolysaccharide (LPS) stimulation, which results in the activation and translocation of NF κ B and suggests that these receptors are involved in mediating inflammatory responses. TLR3 is highly expressed in placenta and pancreas, and is limited to the dendritic subpopulation of leukocytes. TLR3 recognizes dsRNA associated with viral infection and induces activation of NF κ B and production of type I interferons, which suggests that it may play a role in host defense against viruses. TLR6 is highly homologous to TLR1, sharing greater than 65% sequence identity. Like other members of TLR family, TLR6 induces NF κ B signaling upon activation.

CHROMOSOMAL LOCATION

Genetic locus: TLR3 (human) mapping to 4q35.1.

SOURCE

TLR3 (H-125) is a rabbit polyclonal antibody raised against amino acids 653-777 of TLR3 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.

APPLICATIONS

TLR3 (H-125) is recommended for detection of TLR3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

TLR3 (H-125) is also recommended for detection of TLR3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TLR3 siRNA (h): sc-36685, TLR3 shRNA Plasmid (h): sc-36685-SH and TLR3 shRNA (h) Lentiviral Particles: sc-36685-V.

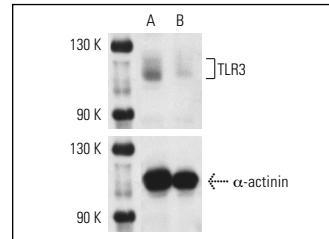
Molecular Weight of TLR3: 117 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, CCRF-HSB-2 cell lysate: sc-2265 or NAMALWA cell lysate: sc-2234.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



TLR3 siRNA (h): sc-36685. Western blot analysis of TLR3 expression in non-transfected control (A) and TLR3 siRNA transfected (B) HeLa cells. Blot probed with TLR3 (H-125): sc-10740. α -actinin (H-2): sc-17829 used as specificity and loading control.

SELECT PRODUCT CITATIONS

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- Jackson, A.C., et al. 2006. Expression of toll-like receptor 3 in the human cerebellar cortex in rabies, herpes simplex encephalitis, and other neurological diseases. *J. Neurovirol.* 12: 229-234.
- Ciferska, H., et al. 2008. Expression of nucleic acid binding toll-like receptors in control, lupus and transplanted kidneys-a preliminary pilot study. *Lupus* 17: 580-585.
- Zhou, M., et al. 2009. Toll-like receptor expression in normal ovary and ovarian tumors. *Cancer Immunol. Immunother.* 58: 1375-1385.
- Ménager, P., et al. 2009. Toll-like receptor 3 (TLR3) plays a major role in the formation of rabies virus Negri Bodies. *PLoS Pathog.* 5: e1000315.
- Imazumi, T., et al. 2011. Basic-helix-loop-helix transcription factor DEC2 constitutes negative feedback loop in IFN- β -mediated inflammatory responses in human mesangial cells. *Immunol. Lett.* 136: 37-43.
- Cappelletti, C., et al. 2011. Type I interferon and Toll-like receptor expression characterizes inflammatory myopathies. *Neurology* 76: 2079-2088.
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RESEARCH USE

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