

# TLR9 (F-3): sc-515921

## 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 $\kappa$ 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. Du, X., et al. 2000. Three novel mammalian Toll-like receptors: gene structure, expression, and evolution. Eur. Cytokine Netw. 11: 362-371.
5. Chuang, T.H. and Ulevitch, R.J. 2000. Cloning and characterization of a subfamily of human Toll-like receptors: hTLR7, hTLR8, hTLR9. Eur. Cytokine Netw. 11: 372-378.

## CHROMOSOMAL LOCATION

Genetic locus: TLR9 (human) mapping to 3p21.2; Tlr9 (mouse) mapping to 9 F1.

## SOURCE

TLR9 (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1007-1032 at the C-terminus of TLR9 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

TLR9 (F-3) is recommended for detection of TLR9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Suitable for use as control antibody for TLR9 siRNA (h): sc-40270, TLR9 siRNA (m): sc-40271, TLR9 siRNA (r): sc-270187, TLR9 shRNA Plasmid (h): sc-40270-SH, TLR9 shRNA Plasmid (m): sc-40271-SH, TLR9 shRNA Plasmid (r): sc-270187-SH, TLR9 shRNA (h) Lentiviral Particles: sc-40270-V, TLR9 shRNA (m) Lentiviral Particles: sc-40271-V and TLR9 shRNA (r) Lentiviral Particles: sc-270187-V.

Molecular Weight of TLR9: 113 kDa.

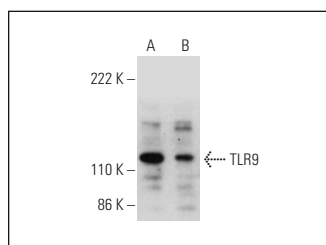
Molecular Weight of glycosylated TLR9: 160 kDa.

Positive Controls: TLR9 (h): 293T Lysate: sc-115275, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

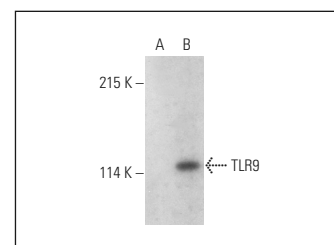
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



TLR9 (F-3): sc-515921. Western blot analysis of TLR9 expression in HeLa (A) and Jurkat (B) whole cell lysates.



TLR9 (F-3): sc-515921. Western blot analysis of TLR9 expression in non-transfected: sc-117752 (A) and human TLR9 transfected: sc-115275 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Ershova, E.S., et al. 2022. In vitro analysis of biological activity of circulating cell-free DNA isolated from blood plasma of schizophrenic patients and healthy controls. Genes 13: 551.

## RESEARCH USE

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