

TLR2 (A-9): sc-166900

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 lipopolysaccharide (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, macrophages 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.

CHROMOSOMAL LOCATION

Genetic locus: TLR2 (human) mapping to 4q31.3.

SOURCE

TLR2 (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 755-785 at the C-terminus of TLR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TLR2 (A-9) is available conjugated to agarose (sc-166900 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166900 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166900 PE), fluorescein (sc-166900 FITC), Alexa Fluor® 488 (sc-166900 AF488), Alexa Fluor® 546 (sc-166900 AF546), Alexa Fluor® 594 (sc-166900 AF594) or Alexa Fluor® 647 (sc-166900 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166900 AF680) or Alexa Fluor® 790 (sc-166900 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166900 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TLR2 (A-9) is recommended for detection of TLR2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

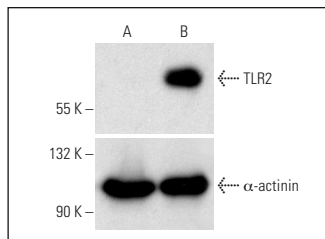
Suitable for use as control antibody for TLR2 siRNA (h): sc-40256, TLR2 shRNA Plasmid (h): sc-40256-SH and TLR2 shRNA (h) Lentiviral Particles: sc-40256-V.

Molecular Weight of TLR2: 90-100 kDa.

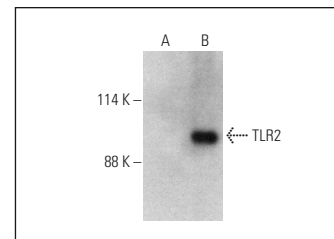
STORAGE

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

DATA



TLR2 CRISPR Activation Plasmid (h): sc-400267-ACT. Western blot analysis of TLR2 expression in non-transfected control (A) and TLR2 CRISPR Activation Plasmid transfected (B) HEK293T whole cell lysates. Blot was probed with TLR2 (A-9): sc-166900. α-actinin (H-2): sc-17829 used as specificity and loading control.



TLR2 (A-9): sc-166900. Western blot analysis of TLR2 expression in non-transfected: sc-117752 (A) and human TLR2 transfected: sc-115116 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Kim, D.C., et al. 2011. Vascular anti-inflammatory effects of curcumin on HMGB1-mediated responses *in vitro*. *Inflamm. Res.* 60: 1161-1168.
- Huang, Y., et al. 2012. Gene silencing of Toll-like receptor 2 inhibits proliferation of human liver cancer cells and secretion of inflammatory cytokines. *PLoS ONE* 7: e38890.
- Sun, Z., et al. 2013. Vaccination inhibits TLR2 transcription via suppression of GR nuclear translocation and binding to TLR2 promoter in porcine lung infected with *Mycoplasma hyopneumoniae*. *Vet. Microbiol.* 167: 425-433.
- Rajalakshmy, A.R., et al. 2014. HCV core and NS3 proteins mediate Toll like receptor induced innate immune response in corneal epithelium. *Exp. Eye Res.* 128: 117-128.
- Savitri, I.J., et al. 2015. Irsogladine maleate inhibits *Porphyromonas gingivalis*-mediated expression of Toll-like receptor 2 and interleukin-8 in human gingival epithelial cells. *J. Periodontal Res.* 50: 486-493.
- Lee, W., et al. 2018. Isolation, synthesis, and antiseptic effects of a C-methylcoumarinochrome isolated from *Abronia nana* cell culture. *J. Nat. Prod.* 81: 1173-1182.
- Ng, C.T., et al. 2018. Gold nanoparticles induce serum Amyloid A1-Toll-like receptor 2 mediated NFκB signaling in lung cells *in vitro*. *Chem. Biol. Interact.* 289: 81-89.
- Yang, S., et al. 2019. Aloin reduces HMGB1-mediated septic responses and improves survival in septic mice by activation of the SIRT1 and PI3K/Nrf2/HO-1 signaling axis. *Am. J. Chin. Med.* 1-21.

RESEARCH USE

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

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