SANTA CRUZ BIOTECHNOLOGY, INC.

TLR2 (TL2.1): sc-21759

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 that consists of several leucine-rich regions along with a single cytoplasmic Toll/IL-1R-like domain. TLR2 and TLR4 are activated in response to lipopolysacchride (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 the TLR family, it induces NFκB signaling upon activation.

CHROMOSOMAL LOCATION

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

SOURCE

TLR2 (TL2.1) is a mouse monoclonal antibody raised against CHO-TLR2 cells 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 (TL2.1) is available conjugated to agarose (sc-21759 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-21759 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-21759 PE), fluorescein (sc-21759 FITC), Alexa Fluor® 488 (sc-21759 AF488), Alexa Fluor® 546 (sc-21759 AF546), Alexa Fluor® 594 (sc-21759 AF594) or Alexa Fluor® 647 (sc-21759 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-21759 AF680) or Alexa Fluor® 790 (sc-21759 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, TLR2 (TL2.1) is available conjugated to PerCP-Cy5.5 (sc-21759 PCPC5), 100 tests in 2 ml, for IF, IHC(P) and FCM.

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 for detailed protocols and support products.

APPLICATIONS

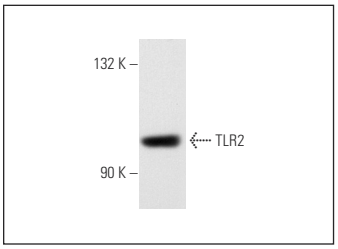
TLR2 (TL2.1) is recommended for detection of TLR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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.

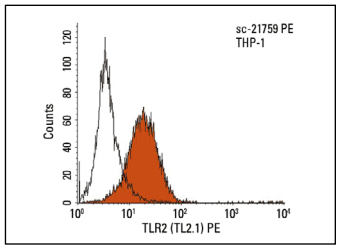
Molecular Weight of TLR2: 90-100 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, A549 cell lysate: sc-2413 or THP-1 cell lysate: sc-2238.

DATA



TLR2 (TL2.1): sc-21759. Western blot analysis of TLR2 expression in THP-1 whole cell lysate.



TLR2 (TL2.1) PE: sc-21759 PE. FCM analysis of THP-1 cells. Black line histogram represents the isotype control, normal mouse IgG_{2a}-PE: sc-2867.

SELECT PRODUCT CITATIONS

1. Matsumoto, S., et al. 2005. Probiotic *Lactobacillus*-induced improvement in murine chronic inflammatory bowel disease is associated with the down-regulation of pro-inflammatory cytokines in lamina propria mononuclear cells. Clin. Exp. Immunol. 140: 417-426.
2. Dushku, E., et al. 2019. Probiotic properties and immunomodulatory activity of gastrointestinal tract commensal bacterial strains isolated from the edible farmed snail Cornu aspersum maxima. Fish Shellfish Immunol. 92: 792-801.
3. Upadhyay, R., et al. 2020. Free light chains injure proximal tubule cells through STAT1-HMGB1-TLR axis. JCI Insight 5: e137191.
4. Kim, J.M., et al. 2021. Powdered green tea (matcha) attenuates the cognitive dysfunction via the regulation of systemic inflammation in chronic $PM_{2.5}$-exposed BALB/c mice. Antioxidants 10: 1932.
5. Jin, Y., et al. 2022. Ginsenoside Rh1 protects human endothelial cells against lipopolysaccharide-induced inflammatory injury through inhibiting TLR2/4-mediated STAT3, NFκB, and ER stress signaling pathways. Life Sci. 309: 120973.

RESEARCH USE

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