

TLR2 (11G7): sc-47728

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.

REFERENCES

1. Gay, N.J., et al. 1991. *Drosophila* Toll and IL-1 receptor. *Nature* 351: 355-356.
2. Medzhitov, R., et al. 1997. A human homologue of the *Drosophila* Toll protein signals activation of adaptive immunity. *Nature* 388: 394-397.
3. Rock, F.L., et al. 1998. A family of human receptors structurally related to *Drosophila* Toll. *Proc. Natl. Acad. Sci. USA* 95: 588-593.
4. Yang, R.B., et al. 1998. Toll-like receptor-2 mediates lipopolysaccharide-induced cellular signalling. *Nature* 395: 284-288.
5. Brightbill, H.D., et al. 1999. Host defense mechanisms triggered by microbial lipoproteins through Toll-like receptors. *Science* 285: 732-736.
6. Chow, J.C., et al. 1999. Toll-like receptor-4 mediates lipopolysaccharide-induced signal transduction. *J. Biol. Chem.* 274: 10689-10692.

CHROMOSOMAL LOCATION

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

SOURCE

TLR2 (11G7) is a mouse monoclonal antibody raised against TLR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for biological studies, sc-47728 L, 200 µg/0.1 ml.

TLR2 (11G7) is available conjugated to either phycoerythrin (sc-47728 PE) or fluorescein (sc-47728 FITC), 200 µg/ml, for WB (RGB), 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.

APPLICATIONS

TLR2 (11G7) is recommended for detection of TLR2 of human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ 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.

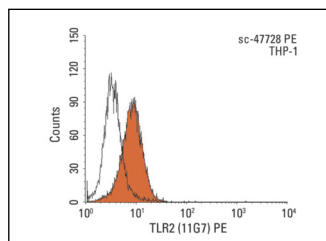
Molecular Weight of TLR2: 90-100 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



TLR2 (11G7) PE: sc-47728 PE. FCM analysis of THP-1 cells. Black line histogram represents the isotype control, normal mouse IgG₁-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Wang, L., et al. 2014. Signaling mechanism for *Aspergillus fumigatus* tolerance in corneal fibroblasts induced by LPS pretreatment. *Innate Immun.* 20: 563-573.
2. Sabbir, M.G., et al. 2018. Muscarinic acetylcholine type 1 receptor activity constrains neurite outgrowth by inhibiting microtubule polymerization and mitochondrial trafficking in adult sensory neurons. *Front. Neurosci.* 12: 402.
3. Sabbir, M.G. and Fernyhough, P. 2018. Muscarinic receptor antagonists activate ERK-CREB signaling to augment neurite outgrowth of adult sensory neurons. *Neuropharmacology* 143: 268-281.

RESEARCH USE

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



See **TLR2 (TL2.1): sc-21759** for TLR2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.