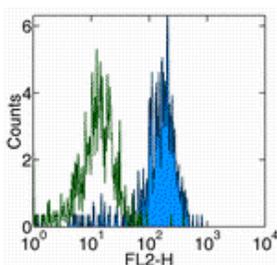


Anti-Human CD282 (TLR2) Functional Grade Purified

Catalog Number: 16-9922

Also Known As: toll-like receptor 2

RUO: For Research Use Only



Staining of normal human peripheral blood cells with Anti-Human CD282 (TLR2) PE. Appropriate isotype controls were used (open histogram). Cells in the monocyte population were used for analysis.

Product Information

Contents: Anti-Human CD282 (TLR2) Functional Grade Purified

REF **Catalog Number:** 16-9922

Clone: TL2.1

Concentration: 1 mg/mL

Host/Isotype: Mouse IgG2a, kappa

Handling Conditions: Use in sterile environment.

Endotoxin Level: Less than 0.001 ng/ug antibody, as determined by the LAL assay.

Formulation: aqueous buffer, no sodium azide

 **Temperature Limitation:** Store at 2-8°C.

LOT **Batch Code:** Refer to Vial

 **Use By:** Refer to Vial

Description

The TL2.1 monoclonal antibody reacts with human Toll-like receptor 2 (TLR2). To date, at least ten members of the Toll family have been identified in human. This family of type I transmembrane proteins is characterized by an extracellular domain with leucine-rich repeats and a cytoplasmic domain with homology to the type I IL-1 receptor. Two of these receptors, TLR2 and TLR4, are pattern recognition receptors and signaling molecules in response to bacterial lipoproteins and have been implicated in innate immunity and inflammation. TLR2 is expressed by peripheral blood monocytes and is responsible for distinguishing different pathogens. TL2.1, a blocking antibody, has been used to study the role of TLR-2 as a pattern recognition receptor in microbial lipoprotein/lipopeptide induced cytokine production from human peripheral blood mononuclear cells. TL2.1 has been reported to immunoprecipitate human TLR2 (~90 kDa) from PBMC and HMEC.

Applications Reported

TL2.1 has been reported for use in flow cytometric analysis and blocking of TLR2-mediated cytokine production. Inhibition of cytokine production has been reported in the literature using *Listeria monocytogenes* and peptidoglycans. Optimal conditions for the inhibition assays using TL2.1 and specific stimulatory reagents/suppliers have to be evaluated by individual investigators.

Neutralization Protocol: (Important note: make sure to eliminate LPS contamination in the culture system)

- 1) Prepare target cells of interest at the concentration of 2×10^6 /ml in 10% FBS-IMDM (or 5% human serum).
- 2) Pre-incubate the cells with 10-20 μ g/ml of TL2.1 or isotype control antibody at room temperature for 30min.
- 3) Add the stimuli and incubate at 37°C, 5% CO₂ for 14 hours. Harvest the supernatants.
- 4) Follow the protocol of eBioscience Ready-SET-Go ELISA set to detect IL-6 or TNF- α production.

Applications Tested

The TL2.1 antibody has been tested by flow cytometric analysis of human peripheral blood leukocytes. This can be used at less than or equal to 1 μ g per test. A test is defined as the amount (μ g) of antibody that will stain a cell sample in a final volume of 100 μ L. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Burgener IA, Jungi TW. Antibodies specific for human or murine Toll-like receptors detect canine leukocytes by flow cytometry. *Vet Immunol Immunopathol.* 2008 Jul 15;124(1-2):184-91. (TL2.1, canine cross-reactivity, PubMed)

Do JE, Kwon SY, Park S, Lee ES. Effects of vitamin D on expression of Toll-like receptors of monocytes from patients with Behcet's

disease. *Rheumatology (Oxford)*. 2008 Jun;47(6):840-8. (TL2.1, FA, PubMed)

Mandron M, Ariès MF, Boralevi F, Martin H, Charveron M, Taieb A, Davrinche C. Age-related differences in sensitivity of peripheral blood monocytes to lipopolysaccharide and Staphylococcus aureus toxin B in atopic dermatitis. *J Invest Dermatol*. 2008 Apr;128(4):882-9. (TL2.1, FA, PubMed)

Bonnefont-Rebeix C, Marchal T, Bernaud J, Pin JJ, Leroux C, Lebecque S, Chabanne L, Rigal D. Toll-like receptor 3 (TLR3): a new marker of canine monocytes-derived dendritic cells (cMo-DC). *Vet Immunol Immunopathol*. 2007 Jul 15;118(1-2):134-9. (TL2.1, canine cross-reactivity, PubMed)

Chan G, Guilbert LJ. Ultraviolet-inactivated human cytomegalovirus induces placental syncytiotrophoblast apoptosis in a Toll-like receptor-2 and tumour necrosis factor-alpha dependent manner. *J Pathol*. 2006 Sep;210(1):111-20. (TL2.1, WB and IHC frozen, PubMed)

Cook EB, Stahl JL, Esnault S, Barney NP, Graziano FM. Toll-like receptor 2 expression on human conjunctival epithelial cells: a pathway for Staphylococcus aureus involvement in chronic ocular proinflammatory responses. *Ann Allergy Asthma Immunol*. 2005 Apr;94(4):486-97. (TL2.1, FA, PubMed)

Ueta M, Nochi T, Jang MH, Park EJ, Igarashi O, Hino A, Kawasaki S, Shikina T, Hiroi T, Kinoshita S, Kiyono H. Intracellularly expressed TLR2s and TLR4s contribution to an immunosilent environment at the ocular mucosal epithelium. *J Immunol*. 2004 Sep 1;173(5):3337-47. (TL2.1, IHC frozen, PubMed)

Iwahashi M, Yamamura M, Aita T, Okamoto A, Ueno A, Ogawa N, Akashi S, Miyake K, Godowski PJ, Makino H. Expression of Toll-like receptor 2 on CD16+ blood monocytes and synovial tissue macrophages in rheumatoid arthritis. *Arthritis Rheum*. 2004 May;50(5):1457-67. (TL2.1, FA, PubMed)

Coleman JL, Benach JL. The urokinase receptor can be induced by *Borrelia burgdorferi* through receptors of the innate immune system. *Infect Immun*. 2003 Oct;71(10):5556-64. (TL2.1, FA, PubMed)

Mori Y, Yoshimura A, Ukai T, Lien E, Espevik T, Hara Y. Immunohistochemical localization of Toll-like receptors 2 and 4 in gingival tissue from patients with periodontitis. *Oral Microbiol Immunol*. 2003 Feb;18(1):54-8. (TL2.1, IHC paraffin, PubMed)

Droemann D, Goldmann T, Branscheid D, Clark R, Dalhoff K, Zabel P, Vollmer E. Toll-like receptor 2 is expressed by alveolar epithelial cells type II and macrophages in the human lung. *Histochem Cell Biol*. 2003 Feb;119(2):103-8. (TL2.1, IHC paraffin, PubMed)

Faure E, Thomas L, Xu H, Medvedev A, Equils O, Arditi M. Bacterial lipopolysaccharide and IFN-gamma induce Toll-like receptor 2 and Toll-like receptor 4 expression in human endothelial cells: role of NF-kappaB activation. *J Immunol*. 2001 Feb 1;166(3):2018-24. (TL2.1, WB and IHC frozen, PubMed)

Flo TH, Halaas O, Lien E, Ryan L, Teti G, Golenbock DT, Sundan A, Espevik T. Human toll-like receptor 2 mediates monocyte activation by *Listeria monocytogenes*, but not group B streptococci or lipopolysaccharide. *J Immunol*. 2000 Feb 15;164(4):2064-9. (TL2.1, Immunoprecipitation)

Lien E, Sellati TJ, Yoshimura A, Flo TH, Rawadi G, Finberg RW, Carroll JD, Espevik T, Ingalls RR, Radolf JD, Golenbock DT. Toll-like receptor 2 functions as a pattern recognition receptor for diverse bacterial products. *J Biol Chem*. 1999 Nov 19;274(47):33419-25.

Related Products

11-4011 Anti-Mouse IgG FITC

14-8185 B18R Recombinant Protein

14-9029 Anti-Human CD282 (TLR2) Purified (TL2.3)

16-4724 Mouse IgG2a K Isotype Control Functional Grade Purified

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