

Monoclonal Antibody to TLR2 (Toll-like receptor 2)/CD282



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Monoclonal Antibody to TLR2 (Toll-like receptor 2)/CD282

Catalog No : IMG-319
Formulation : Ascites in 200 ul PBS containing 0.05% BSA and 0.05% sodium azide. Sodium azide is highly toxic.
Isotype : Mouse IgG1
Clone : 1030A5.138
Species React : Human
Host : Mouse

Application
Western blot analysis: 1:250-1000
Flow (Intracellular): 2.5-5 ul/10⁶ cells
Flow (Cell Surface): 2.5-5 ul/10⁶ cells
IHC (paraffin): 1:100

Storage
Store at 4°C, stable for 6 months. For long-term storage, store at -20°C.

Background

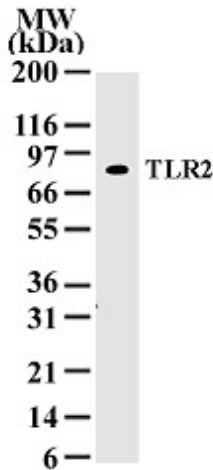
The Toll-like receptor (TLR) family in mammal comprises a family of transmembrane proteins characterized by multiple copies of leucine rich repeats in the extracellular domain and IL-1 receptor motif in the cytoplasmic domain. Like its counterparts in *Drosophila*, TLRs signal through adaptor molecules (1). The TLR family is a phylogenetically conserved mediator of innate immunity that is essential for microbial recognition (2). Ten human homologs of TLRs (TLR1-10) have been described (3). TLR2 is differentially expressed in human cells. TLR2 is expressed in tonsils, lymph nodes, and appendices, activated B-cells in germinal centers. CD14+ monocytes expressed the highest level of TLR2 followed by CD15+ granulocytes, and CD19+ B-cells, CD3+ T-cells, and CD56+ NK cells did not express TLR2. The expression of TLR2 on different cell types are regulated by different immune response modifiers. For example, LPS, GM-CSF, IL-1, and IL-10 up regulates TLR2 whereas IL-4, IFN-gamma, and TNF down regulate TLR2 expression in monocytes (4).

Antigen

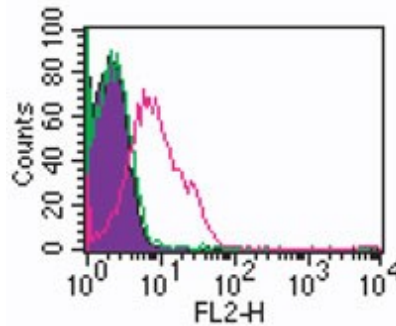
This antibody was developed against the extracellular domain of human TLR2.

Genebank Info (Protein)

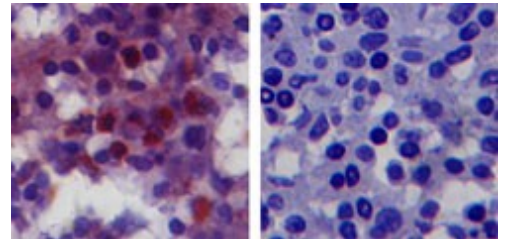
NP_003255



Western blot analysis of TLR2 in 30 ugs of Ramos whole cell lysate using IMG-319 at 1:500.



Cell surface flow analysis of TLR2 in 10⁶ human monocytes using 2.5 ul of IMG-319. The shaded histogram represents cells with no antibody present; green represents isotype control (IMGENEX, 20109); red represents TLR2 antibody. Goat anti mouse IgG1 PE secondary was used.



IHC analysis of TLR2 in paraffin-embedded human spleen tissue using IMG-319 at 1:100 (left) and isotype control (right).

Related Products

- 20101 [Goat Anti-Mouse Ig HRP Conjugate]
- 20102 [Goat Anti-Mouse IgG (H+L)-FITC Conjugate]
- 20103 [Goat Anti-Mouse IgG (H+L) PE conjugated secondary antibody]
- IMG-5019A-1 [Monoclonal Antibody to GAPDH - Loading Control]
- IMG-5019A-2 [Monoclonal Antibody to GAPDH - Loading Control]
- 40175 [Ramos cell line lysate (human Lymphoblast, Burkitt's lymphoma)]
- IMG-2201 [Pam3CSK4, TLR1 and TLR2 Ligand]
- IMG-2206 [MALP-2, TLR6/TLR2 ligand]

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Reference

1. Chuang TH and Ulevitch RJ. *Biochim. Biophys. Acta* 1518 (1-2): 157-161 (2001).
2. Flo TH, Halaas O, Torp S, Ryan L, Lien E, Dybdahl B, Sundan A, Espevik T. *J Leukoc Biol* 69(3): 474-481 .
3. Muzio M, Natoli G, Saccani S, Levrero M, and Mantovani A. *J. Exp. Med.* 187: 2097-2101 (1998).
4. Medzhitov R and Janeway CA. *Cell* 91: 295-298 (1997).
5. Chuang TH and Ulevitch RJ. *Eur Cytokine Netw* 11(3): 372-378 (2000).

Product Citations

1. **Glucocorticoids Synergistically Enhance Nontypeable Haemophilus influenzae-induced Toll-like Receptor 2 Expression via a Negative Cross-talk with p38 MAP Kinase.** Shuto T, A Imasato, H Jono, A Sakai, H Xu, T Watanabe, D D. Rixter, H Kai, A Andalibi, F Linthicum, Y-L Guan, J Han, A C. B. Cato, D J. Lim, S Akira, and J-D Li. *J. Biol. Chem*; 277: 17263-17270 (2002). **1. IMGENEX antibodies cited for WB : 1. TLR2 (IMG-319) [Fig. 4B (HeLa cells)].**
2. **Microarray Analysis Reveals Induction of Lipoprotein Genes in Mucoid Pseudomonas aeruginosa: Implications for Inflammation in Cystic Fibrosis.** AM. Firoved, W Ornatowski, and V Deretic. *Infect. Immun.*, 72: 5012-5018 (2004). **IMGENEX antibodies cited for WB: 1. TLR2 (IMG-319), [Fig.2B: (CF (IBF3-1) and CFTR corrected cells), Fig.3C: (NuLi and 9/HTEO- cells)].**
3. **Soluble Forms of Toll-Like Receptor (TLR)2 Capable of Modulating TLR2 Signaling Are Present in Human Plasma and Breast Milk.** LeBouder E, J E. Rey-Nores, N K. Rushmere, M Grigorov, Stephen D. Lawn, Michael Affolter, George E. Griffin, Pascual Ferrara, Eduardo J. Schiffrin, B. Paul Morgan and Mario O. Labéta. *J. Immunol*, 171: 6680-6689 (2003). **IMGENEX antibodies cited: 1. TLR2 (IMG-319 and IMG-410); For IMG-319: WB, Fig.1D and Fig.6C (Mono Mac-6 monocytes); For IMG-410: Fig.6A-B, (human breast milk).**
4. **Inhibition of neutrophil apoptosis by TLR agonists in whole blood: involvement of the phosphoinositide 3-Kinase/Akt and NF- κ B signaling pathways, leading to increased levels of Mcl-1, A1, and phosphorylated bad.** François S, J El Benna, M Pham . C Dang, E Pedruzzi, M Gougerot-Pocidaló, C Elbim. *J. Immunol* 174: 3633-3642 (2005). **Imgenex antibodies cited [WB (human polymorphonuclear neutrophils (PMN)), Fig. 5]:**
 1. TLR2 (IMG-319)
 2. TLR3 (IMG-315A)
 3. TLR5 (IMG-664)
 4. TLR7(IMG-581A)

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