

Monoclonal Antibody to TLR5 (Toll-like receptor 5)



11175 Flintkote Ave., Suite E, San Diego, CA 92121
Tel: (858) 642-0978 Fax (858) 642-0937
Toll free: 1-888-723-GENE
E-mail: info@imgenex.com
web site: <http://www.imgenex.com>

Monoclonal Antibody to TLR5 (Toll-like receptor 5)

Catalog No : IMG-664
Formulation : 0.1 mg in 0.2 ml PBS containing 0.05% BSA, 0.05% sodium azide. Sodium azide is highly toxic.
Isotype : Mouse IgG2a, Kappa
Clone : 19D759.2
Purification : Protein G Chromatography
Species React : Human, Mouse
Host : Mouse

Application
Western blot analysis: 1-3 ug/ml
Flow (Intracellular): 1-3 ug/ 1x10⁶ cells
IHC (frozen): 10 ug/ml (see Product citation, Miller et al, 2005).

Storage
Store at 4°C for six months. For long term storage, store at -20°C. Avoid repeat freeze-thaws.

Recommended Positive Control: Ramos

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 and could constitute an important and unrecognized component of innate immunity in humans. The TLR family is a phylogenetically conserved mediator of innate immunity that is essential for microbial recognition. TLRs characterized so far activate the MyD88/interleukin-1 receptor-associated kinase (IRAK) signaling pathway. Thirteen human homologs of TLRs (TLR1-13) have been described. Toll-like receptor 5 (TLR5) expression is upregulated following exposure to bacteria or to the TLR5 agonist, flagellin. Gram-negative bacteria, stimulate monocyte/macrophage cells in a TLR5-specific, CD14-independent manner. The TLR5 receptor thus appears to be the principal means by which the innate immune system recognizes flagellated bacterial pathogens.

Antigen

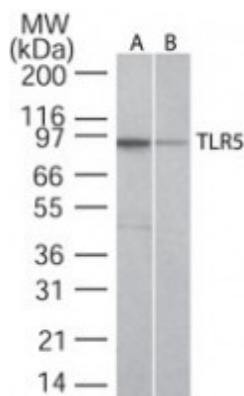
This antibody was developed against KLH-conjugated synthetic peptide corresponding to a portion of human TLR5 between amino acids 700-800. The antibody also reacts with mouse TLR5.

Application Notes

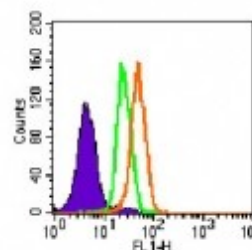
This antibody recognizes an intracellular epitope in the cytoplasmic domain of TLR5.

Genebank Info (Protein)

NP_003259



Western blot analysis of TLR5 in A) Ramos and B) Raw cell lysate using IMG-664A at 2 ug/ml.



Intracellular flow analysis of TLR5 in Ramos cells using 1 ug of IMG-664A. Shaded histogram represents cells without antibody; green represents isotype control; orange represents anti-TLR5 antibody.

Related Products

1. IMG-319 [Monoclonal Antibody to TLR2 (Toll-like receptor 2)/CD282]
2. IMG-321A [Monoclonal Antibody to human TLR8 (Toll-like receptor 8)/CD288]
3. IMG-410A [Polyclonal Antibody to TLR2 (Toll-like receptor 2)/CD282]
4. IMG-415 [Monoclonal Antibody to MD-2]
5. IMG-416A [Monoclonal Antibody against human TLR2 (Toll-like receptor 2)/CD282]
6. IMG-417A [Monoclonal Antibody to human TLR4 (Toll-like receptor 4)/CD284]
7. IMG-428A [Monoclonal Antibody to Mouse TLR4 (Toll-like receptor 4)/CD284]
8. IMG-431 [Polyclonal Antibody to TLR9/CD289]

Monoclonal Antibody to TLR5 (Toll-like receptor 5)

9. IMG-433 [Monoclonal Antibody to human TLR1]
10. IMG-440 [Monoclonal Antibody to human TIRAP (TIR domain-containing adaptor protein)]
11. IMG-441 [Polyclonal Antibody to IRAK-4 (IL-1 receptor associate kinase-4)]
12. IMG-5031A [Monoclonal Antibody to TLR4/CD284 (Clone 76B357.1)]
13. IMG-5033 [Polyclonal Antibody to mouse TLR11 (Toll-like receptor 11)]
14. IMG-5034 [Polyclonal Antibody to TLR12 (Toll-like receptor 12)]
15. IMG-5086 [Polyclonal Antibody to TIR8 (Toll/IL-1R8; Ig IL-1-related receptor)]
16. IMG-516 [Polyclonal Antibody to mouse TLR3 (Toll-like receptor 3)/CD283]
17. IMG-526 [Polyclonal Antibody to TLR2 (Toll-like receptor 2)/CD282]
18. IMG-527 [Polyclonal Antibody to TLR6/CD286 (Toll-like receptor 6)]
19. IMG-540 [Polyclonal Antibody to TLR7 (Toll-like receptor 7)]
20. IMG-545 [Polyclonal Antibody to TLR2/CD282]
21. IMG-578A [Polyclonal Antibody to TLR4 (Toll-like receptor 4)/CD284]
22. IMG-579A [Polyclonal Antibody to TLR4 (Toll-like receptor 4)/CD284]
23. IMG-580 [Polyclonal Antibody to TLR5]
24. IMG-581A [Polyclonal Antibody to TLR7 (Toll-like receptor 7)]
25. IMG-661 [Polyclonal Antibody to mouse TRIF/TICAM1]
26. IMG-662 [Polyclonal Antibody to mouse TLR2 (Toll-like receptor 2)/CD282]
27. IMG-663A [Monoclonal Antibody to TLR5 (Toll-like receptor 5)]
28. IMX-5091 [Polyclonal Antibody to TLR10 (Toll-like receptor 10)]
29. IMX-5093 [Polyclonal Antibody to TLR10 (Toll-like receptor 10)/CD290]
30. IMX-5131 [Polyclonal Antibody to TLR5]
31. IMX-5168 [Polyclonal Antibody to TLR13]
32. IMX-5169 [Polyclonal Antibody to TLR13]
33. IMX-5170 [Polyclonal Antibody to TLR13]
34. 20101 [Goat Anti-Mouse Ig HRP Conjugate]
35. 20102 [Goat Anti-Mouse IgG (H+L)-FITC Conjugate]
36. 20103 [Goat Anti-Mouse IgG (H+L) PE conjugated secondary antibody]
37. IMG-5019A-1 [Monoclonal Antibody to GAPDH - Loading Control]
38. IMG-5019A-2 [Monoclonal Antibody to GAPDH - Loading Control]
39. 40175 [Ramos cell line lysate (human Lymphoblast, Burkitt's lymphoma)]
40. 10083K [IC-Flow (Intracellular Staining Flow Assay) Kit]

Reference

1. Muzio M, Natoli G, Saccani S, Levrero M, and Mantovani A.J. *Exp. Med.* 187: 2097-2101 (1998).
2. Medzhitov R and Janeway CA. *Cell* 91: 295-298 (1997).
3. Chuang TH and Ulevitch RJ. *Biochim. Biophys. Acta* 1518 (1-2): 157-161 (2001).

Product Citations

1. **TGF- α Regulates TLR Expression and Function on Epidermal Keratinocytes.** Miller LS, OE Sørensen, PT Liu, HR Jalian, D Eshtiaghpour, BE Behmanesh, W Chung, TD Starnner, J Kim., PA Sieling, T Ganz and RL Modlin. *J. Immunol.* 174: 6137-6143 (2005). (IHC-frozen) **Imgenex antibodies cited: 1. TLR5 (IMG-664) [IHC-frozen, Fig 1 (normal human skin and psoriasis, primary human organotypic keratinocyte culture)]. 2. TLR9 (IMG-305A) [IHC-frozen, Fig 1 (normal human skin and psoriasis, primary human organotypic keratinocyte culture)].**
2. **Human CD4+ T Cells Express TLR5 and Its Ligand Flagellin Enhances the Suppressive Capacity and Expression of FOXP3 in CD4+CD25+ T Regulatory Cells.** Crellin NK, RV Garcia, O Hadisfar, SE Allan, TS Steiner, and MK Levings. *J. Immunol.* 175: 8051-8059 (2005). **Imgenex antibodies cited: 1. TLR5-FITC (IMG-663C) [Flow-intracellular, Figs 3B and 3D (primary human CD4+ T cells, primary human CD14+ monocytes, primary human monocyte-derived dendritic cells)]; 2. TLR5 (IMG-664) [WB, Fig 5 (primary human CD4+ T cells)] The specificity of the IMG-664 antibody was confirmed by WB with 293T cells transfected with a TLR5 expression vector, documented in the Materials and Methods section)**
3. **Intracellular Signaling Mechanisms Regulating Toll-Like Receptor-Mediated Activation of Eosinophils.** Wong CK, PFY Cheung, WK IP and CWK Lam. *Am. J. Respir. Cell Mol. Biol.* doi:10.1165/rcmb.2006-0457OC (2007), in press. **Imgenex antibodies cited (human blood eosinophils and neutrophils from buffy coat): For WB, Fig. 1A: TLR1 (IMG-5012), TLR5 (IMG-664), TLR6 (IMG-304A), TLR7 (IMG-540), TLR8 (IMG-321A), TLR9 (IMG-305A). For Flow (Intracellular) and Flow (Surface), Fig. 1B: TLR1 (IMG-5021), TLR2 (IMG-416C), TLR3 (IMG-315C), TLR4 (IMG-417C), TLR5 (IMG-663C), TLR6 (IMG-304C), TLR7 (IMG-665A), TLR8 (IMG-321C), TLR9 (IMG-305C).**
4. **Stimulation by TLR5 modulates osteoclast differentiation through STAT1/IFN- γ .** Ha H, J Lee, N Kim, H Kwak, H Kim, S Lee, J Rhee, H Kim, Z Hee Lee. *J Immunol* 180: 1382-1389 (2008). **WB (mouse osteoclasts and bone marrow cells), Fig. 1A.**
5. **The myeloid differentiation factor 88 (MyD88) is required for CD4+ T cell effector function in a murine model of inflammatory bowel disease.** Fukata M, Breglio K, A Chen, A Vamadevan, T Goo, D Hsu, D Conduah, R Xu, M Abreu. *J Immunol* 180: 1382-1389. **Flow (mouse splenic CD4+CD45Rbhigh T cells), Fig. 1.**
6. **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.** Stéphanie François, Jamel El Benna, Pham M. C. Dang, Eric Pedruzzi, Marie-Anne Gougerot-Pocidallo, and Carole 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)

Copyright © IMGEX Corporation. All Rights Reserved

Toll free: 1-888-723-4363

Fax: 1-858-642-0937

www.imgenex.com

info@imgenex.com

Research purposes only. Not for diagnostic or in vivo use.