

Product Datasheet

TLR2 Antibody NB100-56058

Unit Size: 0.1 mg

Store at 4C in the dark.

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NB100-56058

TLR2 Antibody (TL2.1) [FITC]

Product Information	
Unit Size	0.1 mg
Concentration	0.5 mg/ml
Storage	Store at 4C in the dark.
Clonality	Monoclonal
Clone	TL2.1
Preservative	0.05% Sodium Azide
Isotype	IgG2a
Conjugate	FITC
Purity	Protein G purified
Buffer	10 mM Tris, 150 mM NaCl

Product Description	
Host	Mouse
Gene ID	7097
Gene Symbol	TLR2
Species	Human, Canine
Species Reactivity	Human
Specificity/Sensitivity	Toll-like receptors (TLR) are highly conserved throughout evolution and have been implicated in the innate defense to many pathogens. In <i>Drosophila</i> toll is required for the anti-fungal response, while the related 18-wheeler is involved in antibacterial defenses. In mammals, TLR identified as type I transmembrane signaling receptors with pattern recognition capabilities, have been implicated in the innate host defense to pathogens. TLR2 has been identified as a receptor that is central to the innate immune response to lipoproteins of Gram-negative bacteria, several whole Gram-positive bacteria, as well as a receptor for peptidoglycan and lipoteichoic acid and other bacterial cell membrane products. A functional interaction between TLR2 and TLR6 in the cellular response to various bacterial products has been discovered. The currently accepted paradigm regards TLR2 as an essential receptor for many eubacterial cell wall components, including lipoproteins and peptidoglycan. Bacterial species as diverse as mycobacteria, spirochetes, mycoplasma, <i>Staphylococcus aureus</i> , and <i>Streptococcus pneumoniae</i> have all been shown to mediate cellular activation via TLR2. The TL2.1 monoclonal antibody is specific for human Toll-like receptor 2 (TLR2). TL2.1 is a TLR2 function blocking antibody that is useful for studies on the role of TLR2 as a pattern recognition receptor in microbial products induced cytokine production by TLR2 bearing cells such as human peripheral blood mononuclear cells. The antibody can be used for immunoprecipitation of human TLR2 (approximately 90 kDa).
Immunogen	The antibody reacts with the TLR2 antigen.

Product Application Details	
Applications	Flow Cytometry, Immunocytochemistry/Immunofluorescence
Recommended Dilutions	Flow Cytometry 1:10-1:1000, Immunocytochemistry/Immunofluorescence 1:10-1:2000

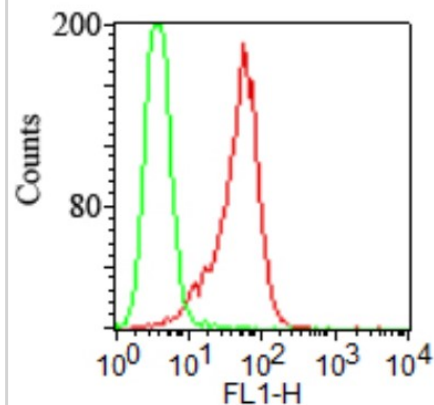


Application Notes

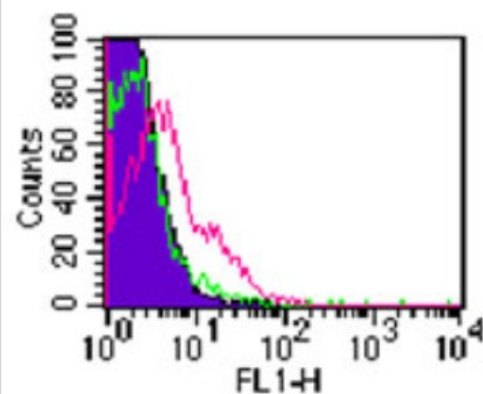
Immunocytochemistry/Immunofluorescence: please see Mempel et al. (2003) for details
 Immunohistochemistry (paraffin): please see Faure et al. (2001) for details
 Western Blot: please see Faure et al. (2001) for details

Images

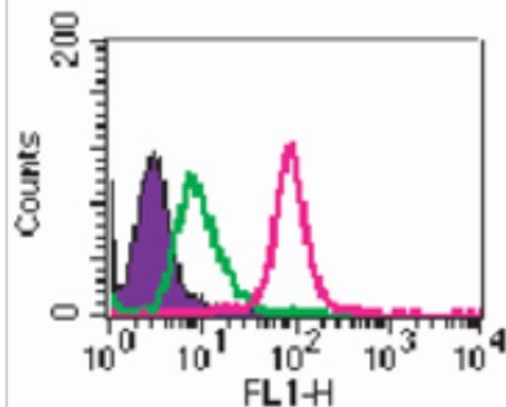
Flow Cytometry: TLR2 Antibody (TL2.1) [FITC] [NB100-56058] - Surface staining of stable HEK293/hTLR2 cells (IML-202, red) and vector control cells (IML-200, green) using TLR2 antibody at 1 ug/10⁶ cells.



Flow Cytometry: TLR2 Antibody (TL2.1) [FITC] [NB100-56058] - Cell surface analysis of TLR2 in 10⁶ PBMCs (lymphocyte-gated) using 2 ugs of Mouse IgG2a Kappa , and red represents TLR2 antibody.



Flow Cytometry: TLR2 Antibody (TL2.1) [FITC] [NB100-56058] - Cell surface analysis of TLR2 in 10⁶ ThP1 cells using 2 ug of this antibody. The closed histogram represents cells alone, green represents isotype control, red represents anti-TLR2 antibody.

**Publications**

Rydberg C, Mansson A, Uddman R et al. Toll-like receptor agonists induce inflammation and cell death in a model of head and neck squamous cell carcinomas. Immunology. 2009 Sep [PMID: 19740321]

Details:

TLR2/CD282 PE (IMG-416D), TLR3/CD283 (IMG-315A), TLR3/CD283 (IMG-315D), TLR5 PE (IMG-663D), TLR5 (IMG-663). 1. IHC(paraffin): Human head and neck squamous (HNSCC) cell carcinomas showing keratinized cell carcinoma from the larynx stained with TLR2 (IMG-416A) and TLR5 antibodies (IMG-663A), Fig 1A, 1B, & 1C. 2. Flow (intracellular): TLR2 PE (IMG-416D), TLR3 PE (IMG-315D), and TLR5 PE (IMG-663D) antibodies were used in human bronchial epithelial (NL-20) and human pharyngeal squamous (Detroit-562) carcinoma cell line, Fig 2C.

Oberg HH, Ly TT, Ussat S et al. Differential but direct abolishment of human regulatory T cell suppressive capacity by various TLR2 ligands. *J Immunol.* 2010 May 1 [PMID: 20363971]

Details:
Flow (intracellular) cytometry: TLR2/CD282 PE (IMG-416D) and TLR6/CD286 (IMG-304A). T cells and Tregs were separated from freshly isolated human PBMCs, Fig S3.

Mempel M, Voelcker V, Kollisch G et al. Toll-like receptor expression in human keratinocytes: nuclear factor kappaB controlled gene activation by *Staphylococcus aureus* is toll-like receptor 2 but not toll-like receptor 4 or platelet activating factor receptor dependent. *J Invest Dermatol.* 2003 Dec [PMID: 14675188] (IF/ICC, Human)

Details:
1. TLR2 (IMG-416) 2. TLR4 (IMG-417) [IF/ICC, Fig.2A and 2D (human keratinocytes)].

Ji S, Shin JE, Kim YS et al. Toll-like receptor 2 and NALP2 mediate induction of human beta-defensins by *fusobacterium nucleatum* in gingival epithelial cells. *Infect Immun.* 2009 Mar [PMID: 19103770] (Flow-CS, Flows-IC)

Details:
Flow (Cell Surface and Intracellular) (HOk-16B cells cocultured with *F. nucleatum*), Fig. 1d Flow (Cell Surface) (TLR2-siRNA-transfected HOk-16B cells infected with *F. nucleatum*), Fig. 4a.

Prabha C, Rajashree P, Sulochana DD. TLR2 and TLR4 expression on the immune cells of tuberculous pleural fluid. *Immunol Lett.* 2008 Apr 15 [PMID: 18295348] (Flow-CS, Human)

Details:
Antibodies cited: 1. TLR2- FITC (IMG-416C): Flow (cell surface): Figs. 1A,B (human CD4+T cells, CD8+T cells, B cells, CD16+56+ cells and monocytes); 2(CD4+T cells); 4A,B (human Treg cells). Flow (intracellular): Fig. 3A,B (CD4+T cells) 2. TLR4- FITC (IMG-

Tsai CC, Lin CR, Tsai HY et al. The immunologically active oligosaccharides isolated from wheatgrass modulate monocytes via Toll-like receptor-2 signaling. *J Biol Chem.* 2013 Jun 14 [PMID: 23629653]

Details:
Antibodies cited (THP-1 cells): 1. TLR2, clone TL2.1 (IMG-416E): Neutralization assays (Fig 7), pre-treatment with the TLR2 mAb inhibited maltoheptaose-stimulated cytokine expression. Inhibition was TLR2 mAb dose dependent; WB (Fig 7), TLR2 was detected a

Menzies BE, Kenoyer A. Signal transduction and nuclear responses in *Staphylococcus aureus*-induced expression of human beta-defensin 3 in skin keratinocytes. *Infect Immun.* 2006 Dec [PMID: 16954397] (Flow, Human)

Details:
TLR2 [IMG-416E] 1. FA (human keratinocytes), Fig. 2.

Ding J, Rapista A, Teleshova N et al. *Neisseria gonorrhoeae* enhances HIV-1 infection of primary resting CD4+ T cells through TLR2 activation. *J Immunol.* 2010 Mar 15 [PMID: 20147631] (Flow-CS, Human)

Details:
TLR2/CD282 (IMG-416C). Flow (Cell surface), Fig 6D (human CD4+T cells).

Wong CK, Cheung PF, Ip WK, Lam CW. Intracellular signaling mechanisms regulating toll-like receptor-mediated activation of eosinophils. *Am J Respir Cell Mol Biol.* 2007 Jul [PMID: 17332440] (Flow-CS, Flow-IC, Human)

Details:
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 (IM

Gibson FC 3rd, Hong C, Chou HH et al. Innate immune recognition of invasive bacteria accelerates atherosclerosis in apolipoprotein E-deficient mice. *Circulation*. 2004 Jun 8 [PMID: 15123526]

Details:

Antibodies cited: 1. TLR2 (IMG-416A and IMG-416C, referred to as TLR-2 monoclonal antibody); For IMG-416A: RT-PCR, Fig. 2A (aortic arch tissue, P gingivalis, and mutant P gingivalis), IHC-P, Fig.2B (aortic tissue). For IMG-416C: FACS, Fig.3A-B (P gingival

Harman AN, Bye CR, Nasr N et al. Identification of lineage relationships and novel markers of blood and skin human dendritic cells. *J Immunol*. 2013 Jan 1 [PMID: 23183897] (FLOW, Human)

Details:

Antibodies cited in Fig 4B for flow cytometric analysis of TLR expression in human monocyte-derived dendritic cells (MDDC), CD14+ monocytes, myeloid DC, and plasmacytoid DC:1. TLR2-FITC, clone T2.1 (IMG-416C): Flow (cell surface)2. TLR4-PE, clone HTA124 (

Flo TH, Halaas O, Lien E et al. Human toll-like receptor 2 mediates monocyte activation by *Listeria monocytogenes*, but not by group B streptococci or lipopolysaccharide. *J Immunol*. 2000 Feb 15 [PMID: 10657659]

Details:

Antibodies cited, TLR2 (IMG-416): 1. Generation of the IMG-416 TL2.1 antibody clone, recognizing a TLR2-associated epitope (Materials and Methods) 2. The IMG-416 antibody is TLR2 transfected validated in Fig 3 [Flow (Cell Surface)], and Fig 4 (IP). 3. Flo

More publications at <http://www.novusbio.com/NB100-56058>





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Products Related to NB100-56058

NBL1-16952	TLR2 Overexpression Lysate (Native)
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Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our guarantee, please visit www.novusbio.com/guarantee.

