Product Datasheet

TLR4 Antibody (MTS510) - Azide and BSA Free
NBP2-24865SS

Unit Size: 0.025 mg

Store at -20C. Avoid freeze-thaw cycles.

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Publications: 13

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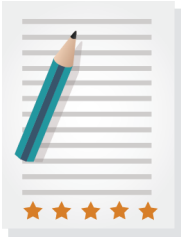
Updated 9/9/2025 v.20.1



NBP2-24865SS

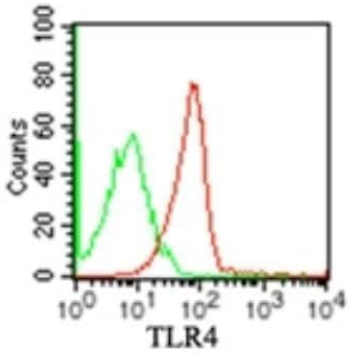
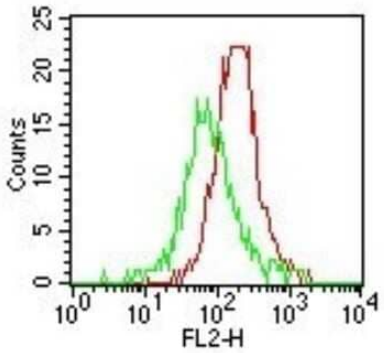
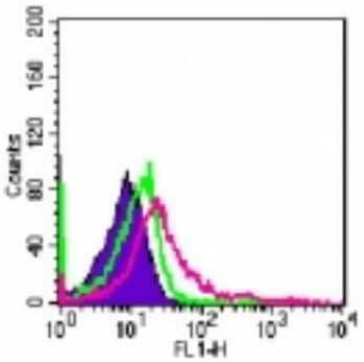
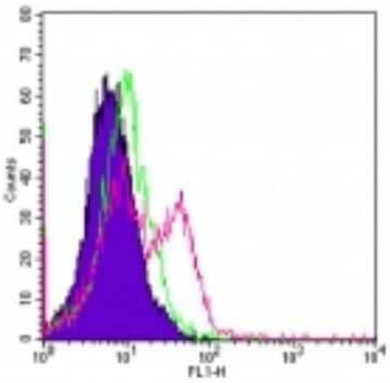
TLR4 Antibody (MTS510) - Azide and BSA Free

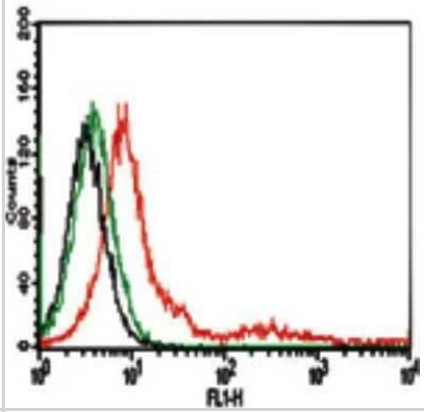
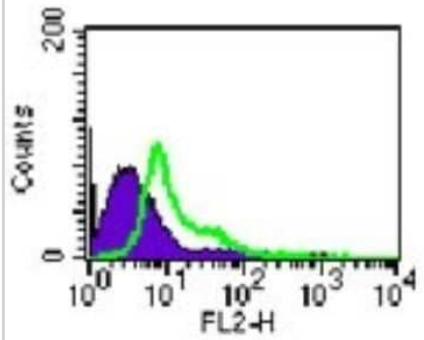
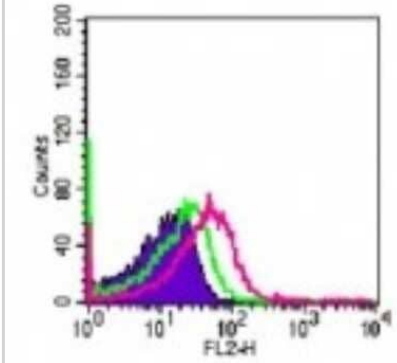
Product Information	
Unit Size	0.025 mg
Concentration	1.0 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	MTS510
Preservative	No Preservative
Isotype	IgG2a Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	95.7 kDa

Product Description	
Description	Novus Biologicals Rat TLR4 Antibody (MTS510) - Azide and BSA Free (NB100-56560) is a monoclonal antibody validated for use in WB, Flow and ICC/IF. Anti-TLR4 Antibody: Cited in 12 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rat
Gene ID	7099
Gene Symbol	TLR4
Species	Human, Mouse
Specificity/Sensitivity	This antibody preferentially recognizes TLR4-MD-2 complex than of TLR4 alone.
Immunogen	This TLR4 Antibody (MTS510) was developed by immunizing rats with the Ba/F3 cell line expressing mouse TLR4 and MD-2 (Akashi et al, 2000).

Product Application Details	
Applications	Western Blot, Flow Cytometry, Flow (Cell Surface), Immunocytochemistry/ Immunofluorescence, Block/Neutralize, CyTOF-ready
Recommended Dilutions	Western Blot reported in scientific literature (PMID 23629653), Flow Cytometry 1ul/1 million cells, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 22573811), Flow (Cell Surface) reported in scientific literature (PMID 15879150), CyTOF-ready, Block/Neutralize
Application Notes	In FA, the antibody blocks activation of monocytes with LPS (Akashi et al. 2000). The optimal condition has to be determined for individual experiments.

Images

Flow Cytometry: TLR4 Antibody (MTS510) - Azide Free [NBP2-24865] - Analysis using Azide/BSA FREE version of NBP2-24865. Cell surface analysis of TLR4 on mouse RAW cells using 0.5 ug/10^6 cells of TLR4 antibody, anti-rat APC conjugated secondary this antibody and TLR cell surface flow kit this antibody (green represents isotype control; red represents TLR4 antibody).	
Flow Cytometry: TLR4 Antibody (MTS510) - Azide Free [NBP2-24865] - Cell surface analysis of TLR4 in mouse peritoneal cells using this antibody. The green histogram represents the isotype control and red represents anti-TLR4 antibody.	
Flow Cytometry: TLR4 Antibody (MTS510) - Azide Free [NBP2-24865] - Analysis using the FITC conjugate of NBP2-24865. Staining of TLR4 in mouse peritoneal cells using 1 ug of this antibody. Shaded histogram represents cells without antibody; green represents isotype control; red represents anti-TLR4 antibody.	
Flow Cytometry: TLR4 Antibody (MTS510) - Azide Free [NBP2-24865] - Analysis using the FITC conjugate of NBP2-24865. Staining of TLR4 in mouse peritoneal cells using 1 ug of this antibody. Shaded histogram represents cells without antibody; green represents isotype control; red represents anti-TLR4 antibody.	

Flow Cytometry: TLR4 Antibody (MTS510) - Azide Free [NBP2-24865] - Analysis using the FITC conjugate of NBP2-24865. Staining of TLR4 in RAW cells using 0.5 ug of this antibody. Black histogram represents cells without antibody; green represents isotype control; red represents anti-TLR4 antibody.	
Flow (Cell Surface): TLR4 Antibody (MTS510) - Azide Free [NBP2-24865] - Analysis using the PE conjugate of NBP2-24865. Staining of cell surface TLR4 using this antibody at 0.625 ug/10^6 Raw cells (pretreated with anti-CD16/32). The shaded histogram represents the isotype control.	
Flow Cytometry: TLR4 Antibody (MTS510) - Azide Free [NBP2-24865] - Analysis using the PE conjugate of NBP2-24865. Staining of TLR4 in mouse peritoneal cells using 0.5 ug of this antibody. Shaded histogram represents cells without antibody; green represents isotype control; red represents anti-TLR4 antibody.	

Publications

Jung DY, Lee H, Jung BY et al. TLR4, but not TLR2, signals autoregulatory apoptosis of cultured microglia: a critical role of IFN-beta as a decision maker J Immunol 2005-05-10 [PMID: 15879150]

Jung DY, Lee H, Jung BY et al. TLR4, but not TLR2, signals autoregulatory apoptosis of cultured microglia: a critical role of IFN-beta as a decision maker J Immunol (Flow-CS)

Details:
This publication used the FITC conjugated form of this antibody (Cat# NBP2-24450) and the PE conjugated form of this antibody (Cat# NBP2-24741).

Tsukamoto H, Fukudome K, Takao S et al. Lipopolysaccharide-binding protein-mediated Toll-like receptor 4 dimerization enables rapid signal transduction against lipopolysaccharide stimulation on membrane-associated CD14-expressing cells. Int Immunol. 2010-04-01 [PMID: 20133493] (WB)

Details:
TLR4 (IMG-578): WB, TLR4 stably transfected Ba/F3 cells. Note: These cells were immunoprecipitated with a TLR4 mAb (clone UT41) then western blotted with the IMG-578A TLR4 pAb Fig 3B. 3. TLR4 (IMG-428A): Flow (cell surface), RAW264 and TLR4 stably transfected Ba/F3 cells. Figs 1B, 1E.

Schaefer L, Babelova A, Kiss E et al. The matrix component biglycan is proinflammatory and signals through Toll-like receptors 4 and 2 in macrophages J Clin Invest 2005-08-01 [PMID: 16025156]

Details:
This reference used the Azide Free version of NB100-56560.

Park HJ, Hong JH, Kwon HJ et al. TLR4-mediated activation of mouse macrophages by Korean mistletoe lectin-C (KML-C). Biochem Biophys Res Commun. 2010-06-04 [PMID: 20450885] (WB, Mouse)

Details:
The following antibodies were used: TLR4/CD284 (IMG-428E), TLR4/CD284 (IMG-577), and TLR4 (IMG-6307A). IMG-577 & IMG-6307A were used in Fig 1 (WB): Peritoneal primary mouse (BALB/C) macrophages stimulated with LPS and then treated with KML-C (Korean mistl

El Shikh ME, El Sayed RM, Wu Y et al. TLR4 on follicular dendritic cells: an activation pathway that promotes accessory activity. J Immunol. 2007-10-01 [PMID: 17878340]

Details:
Products cited: 1. TLR4-FITC (IMG-428C): Flow (Cell Surface), Fig 1C, D [primary follicular dendritic (FDC) and B cells isolated from BALB/c mouse splenic leukocytes]. FDC cells expressed TLR4, but the B cells did not. 2. TLR4 (IMG-579A): IHC (F), Fig 1A

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 2013-05-01 [PMID: 23629653] (WB)

Ma CY, Shi GY, Shi CS et al. Monocytic thrombomodulin triggers LPS- and gram-negative bacteria-induced inflammatory response. J Immunol. 2012-06-15 [PMID: 22573811] (ICC/IF, Mouse)

Details:
TLR4 (IMG-428A). IF: mouse peritoneal macrophages (Fig 5D).

Corbucci C, Cenci E, Skrzypek F et al. Immune response to Candida albicans is preserved despite defect in O-mannosylation of secretory proteins. Med Mycol. 2007-12-01 [PMID: 17885949] (Flow-CS)

Details:
Products cited (mouse macrophages): 1. IMG-428C (TLR4): Flow (Cell Surface), Fig. 5A 2. IMG-428E (TLR4): FA, Fig. 5B.

Kim MY, Shu Y, Carsillo T et al. hsp70 and a novel axis of type I interferon-dependent antiviral immunity in the measles virus-infected brain. J Virol. 2013-01-01 [PMID: 23135720]

Macedo GC, Magnani DM, Carvalho NB et al. Central role of MyD88-dependent dendritic cell maturation and proinflammatory cytokine production to control Brucella abortus infection. J Immunol. 2008-01-15 [PMID: 18178848] (FLOW, Mouse)

Details:
IMG-428E: FA (mouse bone marrow derived and splenic dentritic cells), Fig. 7C,D.

Bruscia EM, Zhang PX, Satoh A et al. Abnormal trafficking and degradation of TLR4 underlie the elevated inflammatory response in cystic fibrosis. J Immunol. 2011-06-15 [PMID: 21593379]

Details:
1. TLR4/CD284 (IMG-428C) & TLR2/CD282 (IMG-6320C) : WB, IF/ICC, Flow (cell surface): Human macrophages with cystic fibrosis (CF) and wild type (WT) mouse macrophages, Fig 1 & S4. 2. TLR4/CD284 WB: CF and wild type macrophages treated with protein synthesi

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