

Product Datasheet

TLR4 Antibody (MTS510) NB100-56560

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NB100-56560**TLR4 Antibody (MTS510)**

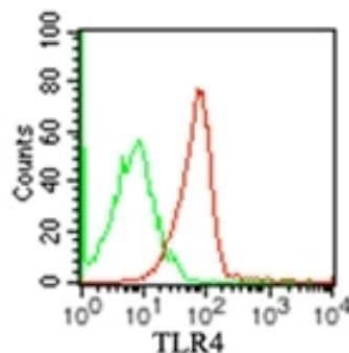
Product Information	
Unit Size	0.1 mg
Concentration	0.5 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	MTS510
Preservative	0.05% Sodium Azide
Isotype	IgG2a Kappa
Purity	Protein G purified
Buffer	PBS, 0.05% BSA
Target Molecular Weight	95.7 kDa

Product Description	
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).

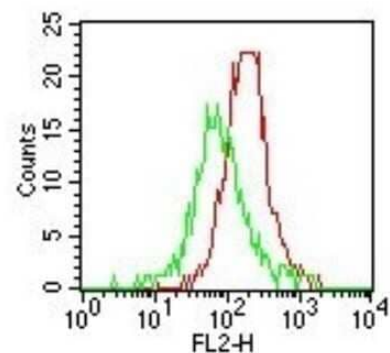
Product Application Details	
Applications	Flow Cytometry, Flow (Cell Surface), Immunocytochemistry/ Immunofluorescence, Immunoprecipitation
Recommended Dilutions	Flow Cytometry 1-2 ug/10 ⁶ cells, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 22573811), Immunoprecipitation 1:10-1:500, Flow (Cell Surface) 1 - 2 ug / 10 ⁶ cells
Application Notes	In FA, the antibody blocks activation of monocytes with LPS (Akashi et al. 2000).

Images

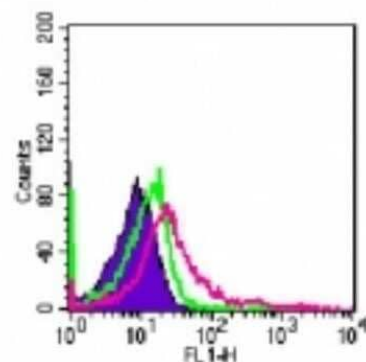
Flow (Cell Surface): TLR4 Antibody (MTS510) [NB100-56560] - Analysis using Azide/BSA FREE version of NBP2-24865. Cell surface analysis of TLR4 on mouse RAW cells using 0.5 ug/10⁶ cells of TLR4 antibody, anti-rat APC conjugated secondary antibody and cell surface flow kit. Green: isotype control. Red: TLR4 antibody.



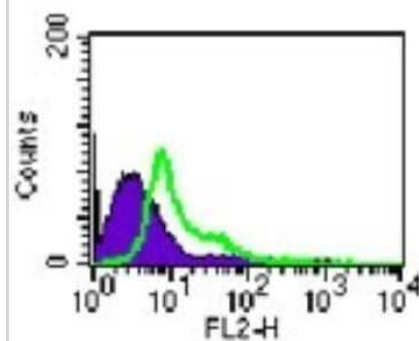
Flow Cytometry: TLR4 Antibody (MTS510) [NB100-56560] - Analysis using Azide Free version of NB100-56560. Cell surface TLR4 in mouse peritoneal cells. Green: isotype control. Red: anti-TLR4 antibody.



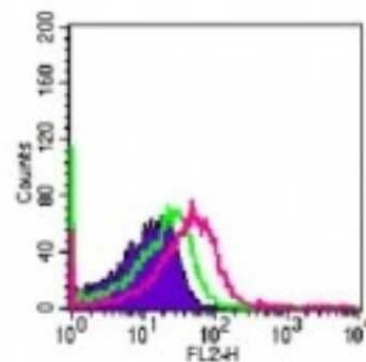
Flow Cytometry: TLR4 Antibody (MTS510) [NB100-56560] - Analysis using the FITC conjugate of NBP2-24865. Staining of TLR4 in mouse peritoneal cells using 1 ug of this antibody. Shaded histogram: Cells without antibody; green represents isotype control; red represents anti-TLR4 antibody.



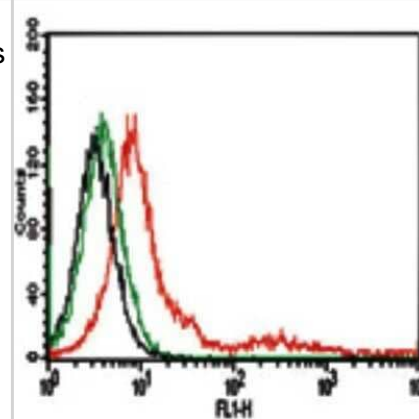
Flow Cytometry: TLR4 Antibody (MTS510) [NB100-56560] - Analysis using the PE conjugate of NBP2-24865. Staining of cell surface TLR4 using this antibody at 0.625 ug/10⁶ Raw cells (pretreated with anti-CD16/32). Shaded histogram: isotype control.



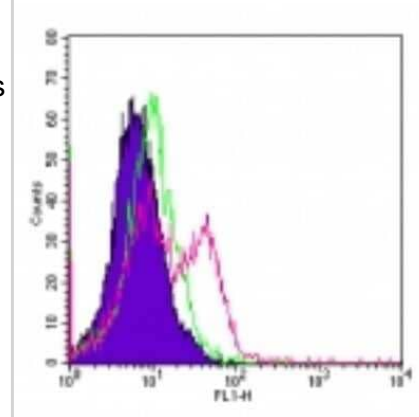
Flow Cytometry: TLR4 Antibody (MTS510) [NB100-56560] - Analysis using the PE conjugate of NBP2-24865. Staining of TLR4 in mouse peritoneal cells using 0.5 ug of this antibody. Shaded histogram represents cells without antibody; green represents isotype control; red represents anti-TLR4 antibody.



Flow Cytometry: TLR4 Antibody (MTS510) [NB100-56560] - 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 Cytometry: TLR4 Antibody (MTS510) [NB100-56560] - 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.



Publications

Mahish C, De S, Chatterjee S et al. TLR4 is one of the receptors for Chikungunya virus envelope protein E2 and regulates virus induced pro-inflammatory responses in host macrophages *Frontiers in Immunology* 2023-04-20 [PMID: 37153546] (FLOW, Flow)

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] (Flow-CS)

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 citation used the Azide Free form of this antibody.

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]

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]

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 dendritic 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 synthesis inhibitor

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Products Related to NB100-56560

NBP2-25295-1.0mg	LPS from E. Coli, TLR4 ligand
NBP2-26244	TLR4 Inhibitor Peptide Set
HAF005	Goat anti-Rat IgG Secondary Antibody [HRP]
NBP1-75398	Goat anti-Rat IgG (H+L) Secondary Antibody (Pre-adsorbed)
NBP1-43321-0.5mg	Rat IgG2a Kappa Light Chain Isotype Control (R2a)

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.

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