

PE anti-mouse TLR4 (CD284)/MD2 Complex Antibody

Catalog# / Size	117605 / 50 µg 117606 / 200 µg
Clone	MTS510
Regulatory Status	RUO
Other Names	Toll-like Receptor 4/MD2 complex, TLR4-MD2-complex, TLR4/MD2, CD284/MD2
Isotype	Rat IgG2a, κ
Description	Toll-like receptors are highly conserved from Drosophila to humans and share structural and functional similarities. They are type I transmembrane signaling receptors which activate the innate immune system in response to pathogen invasion. So far, at least 13 TLR members have been identified. The secretory protein, MD2, associates with cell-surface bound TLR4 (CD284) on monocytes, B cells and T cells. TLR4 has been recognized as critical for host recognition of bacterial LPS in conjunction with MD2.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Ba/F3 cell line transfected with mouse TLR4 /MD2 complex
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Anti-mouse TLR4 clones SA15-21 and MTS510 recognize distinct epitopes and don't cross block each other. ⁸ Clone MTS510 binds to an epitope of TLR4/MD-2 that is lost after LPS stimulation. ⁸ In addition to flow cytometric uses, the MTS510 antibody has also been used for immunoprecipitation, immunofluorescence, and blocking of LPS-induced stimulation. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 117607). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 117612) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).
Application References	<ol style="list-style-type: none"> 1. Akashi S, <i>et al.</i> 2000. <i>J. Immunol.</i> 164:3471. (FC, ICFC, IP, Block) 2. Kawasaki K, <i>et al.</i> 2003. <i>J. Immunol.</i> 170:413. (FC) 3. Nalbandian G, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:2666. (FC) PubMed 4. Kanada S, <i>et al.</i> 2011. <i>Blood</i> 117:2211. PubMed 5. Laplate P, <i>et al.</i> 2011. <i>J. Biol Chem.</i> 286:42494. PubMed 6. Khan MA, <i>et al.</i> 2006. <i>Infect. Immun.</i> 74:2522. (IF) 7. Tanigawa T, <i>et al.</i> 2013. <i>Innate Immun.</i> 19:115. PubMed 8. Akashi S, <i>et al.</i> 2003. <i>J. Exp. Med.</i> 198:1035.
(PubMed link indicates BioLegend citation)	

Product Citations

1. Souza-Fonseca-Guimaraes F, *et al.* 2012. J Immunol. 188:5850. [PubMed](#)
2. Singh M 2014. J Lab Autom. 19:587. [PubMed](#)
3. Takayanagi Y, *et al.* 2020. J Clin Med. 9:00. [PubMed](#)
4. Kimura T, *et al.* 2015. J Immunol. 194:5426. [PubMed](#)
5. Tanigawa T, *et al.* 2013. Innate Immunity. 19:115. [PubMed](#)
6. Raychowdhury R, *et al.* 2021. Immunohorizons. 5:818. [PubMed](#)
7. Cong L, *et al.* 2021. Breast Cancer Res. 23:51. [PubMed](#)
8. Nalbandian G, *et al.* 2005. J Immunol. 175:2666. [PubMed](#)
9. Kanada S, *et al.* 2011. Blood. 117:2211. [PubMed](#)
10. Lim TJF, *et al.* 2020. J Exp Med. 217:00:00. [PubMed](#)

RRID

AB_313792 (BioLegend Cat. No. 117605)
AB_2205138 (BioLegend Cat. No. 117606)

Antigen Details

Structure	Type I transmembrane protein complex
Distribution	Monocytes, B cells and T cells
Function	Activates the innate immune system against Gram-negative bacterial pathogens by recognition of LPS
Ligand/Receptor	Bacterial LPS
Cell Type	B cells, Dendritic cells, Monocytes, T cells, Tregs
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, Toll Like Receptors
Antigen References	1. Frleta D, <i>et al.</i> 2003. <i>J. Leukocyte Biol.</i> 74:1064.
Gene ID	21898

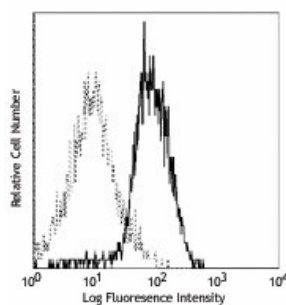
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-mouse TLR4 (CD284)/MD2 Complex, Biotin anti-mouse TLR4 (CD284)/MD2 Complex, PE anti-mouse TLR4 (CD284)/MD2 Complex, PE/Cyanine7 anti-mouse TLR4 (CD284)/MD2 Complex, Ultra-LEAF™ Purified anti-mouse TLR4 (CD284)/MD2 Complex, TotalSeq™-A0875 anti-mouse TLR4 (CD284)/MD2 Complex

Product Data



Thioglycollate-elicited mouse peritoneal macrophages were stained with CD284 (clone MTS510) PE (solid line), or rat IgG2a, κ PE (broken line).

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