

## PE/Cyanine7 anti-mouse TLR4 (CD284)/MD2 Complex Antibody

<b>Catalog# / Size</b>	117609 / 25 µg 117610 / 100 µg
<b>Clone</b>	MTS510
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Toll-like Receptor 4/MD2 complex, TLR4-MD2-complex, TLR4/MD2, CD284/MD2
<b>Isotype</b>	Rat IgG2a, κ
<b>Description</b>	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

<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	Ba/F3 cell line transfected with mouse TLR4 /MD2 complex
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with PE/Cyanine7 under optimal conditions.
<b>Concentration</b>	0.2 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . 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.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Anti-mouse TLR4 clones SA15-21 and MTS510 recognize distinct epitopes and don't cross block each other. <sup>8</sup> Clone MTS510 binds to an epitope of TLR4/MD-2 that is lost after LPS stimulation. <sup>8</sup> 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).
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact <a href="#">Technical Service</a> if you have any questions.
<b>Application References</b>	<ol style="list-style-type: none"> <li>1. Akashi S, <i>et al.</i> 2000. <i>J. Immunol.</i> 164:3471. (FC, ICFC, IP, Block)</li> <li>2. Kawasaki K, <i>et al.</i> 2003. <i>J. Immunol.</i> 170:413. (FC)</li> <li>3. Nalbandian G, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:2666. (FC) <a href="#">PubMed</a></li> <li>4. Kanada S, <i>et al.</i> 2011. <i>Blood</i> 117:2211. <a href="#">PubMed</a></li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

5. Laplate P, *et al.* 2011. *J. Biol Chem.* 286:42494. [PubMed](#)
6. Khan MA, *et al.* 2006. *Infect. Immun.* 74:2522. (IF)
7. Tanigawa T, *et al.* 2013. *Innate Immun.* 19:115. [PubMed](#)
8. Akashi S, *et al.* 2003. *J. Exp. Med.* 198:1035.

## Product Citations

1. Daringer N, *et al.* 2015. *J Biol Chem.* 290:8764. [PubMed](#)
2. Huggins MA, *et al.* 2019. *Cell Rep.* 28:1729. [PubMed](#)
3. Chen Z, *et al.* 2019. *J Exp Med.* 216:152. [PubMed](#)
4. Wang YT, *et al.* 2022. *Cell Rep.* 38:110354. [PubMed](#)
5. Yazji I, *et al.* 2013. *Proc Natl Acad Sci U S A.* 110:9451. [PubMed](#)
6. Zaroni I *et al.* 2017. *Immunity.* 47(4):697-709. [PubMed](#)
7. Zhang T, *et al.* 2021. *Journal of Neurochemistry.* 157(3):611-623. [PubMed](#)
8. Lancaster GI *et al.* 2018. *Cell metabolism.* 27(5):1096-1110. [PubMed](#)
9. Lee GR, *et al.* 2021. *JCI Insight.* 6:. [PubMed](#)

## RRID

AB\_2044019 (BioLegend Cat. No. 117609)  
 AB\_2044020 (BioLegend Cat. No. 117610)

## Antigen Details

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

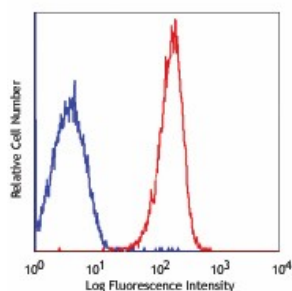
## Related Protocols

[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



Mouse TLR4/MD2/CD14 transfected cells were stained with CD284 (clone MTS510) PE/Cyanine7 (red histogram), or rat IgG2a, κ PE/Cyanine7 (blue histogram).

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