

## TotalSeq™-A0875 anti-mouse TLR4 (CD284)/MD2 Complex Antibody

<b>Catalog# / Size</b>	117614 / 10 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>Barcode Sequence</b>	GCAGTTGTCCGATTC
<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

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<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 and 1 mM EDTA.
<b>Preparation</b>	The antibody was purified by chromatography and conjugated with TotalSeq™-A oligomer under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">PG - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> and the oligomer sequence is confirmed by sequencing. TotalSeq™-A antibodies are compatible with 10x Genomics Single Cell Gene Expression <a href="#">Solutions</a>.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
<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).

## Additional Product Notes

TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. [10x Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit [biolegend.com/totalseq](http://biolegend.com/totalseq).

The barcode flanking sequences are CCTTGGCACCCGAGAATTCCA (PCR handle), and BAAA\*A\*A (capture sequence). B represents either C, G, or T, and \* indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

## Application References

(PubMed link indicates BioLegend citation)

1. Akashi S, *et al.* 2000. *J. Immunol.* 164:3471. (FC, ICFC, IP, Block)
2. Kawasaki K, *et al.* 2003. *J. Immunol.* 170:413. (FC)
3. Nalbandian G, *et al.* 2005. *J. Immunol.* 175:2666. (FC) [PubMed](#)
4. Kanada S, *et al.* 2011. *Blood* 117:2211. [PubMed](#)
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. Guilliams M, *et al.* 2022. *Cell.* 185:379. [PubMed](#)
2. Pisu D, *et al.* 2021. *J Exp Med.* 218:. [PubMed](#)

## RRID

AB\_2810352 (BioLegend Cat. No. 117614)

## Antigen Details

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<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

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[TotalSeq™-A Antibodies and Cell Hashing with 10x Single Cell 3' Reagent Kit v3 3.1 Protocol](#)

## Other Formats

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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

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