

TLR4/MD-2 Complex Monoclonal Antibody (MTS510), Super Bright™ 436, eBioscience™

Product Details	
Size	25 µg
Host/Isotype	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), Super Bright™ 436, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	MTS510
Conjugate	Super Bright™ 436
Excitation/Emission Max	413/431 nm
Form	Liquid
Concentration	0.2 mg/mL
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2762764

Applications	Tested Dilution	Publications
Western Blot (WB)	-	1 Publication
Immunocytochemistry (ICC/IF)	-	1 Publication
Flow Cytometry (Flow)	0.5 µg/test	1 Publication
Neutralization (Neu)	-	1 Publication

Product Specific Information

Description: The MTS510 monoclonal antibody reacts with the mouse Toll-like receptor 4 (TLR4)/MD-2 complex. At least ten members of the Toll family have been identified. This family of type I transmembrane proteins is characterized by an extracellular domain with leucine-rich repeats and a cytoplasmic domain with homology to the type I IL-1 receptor. Two of these receptors, TLR2 and TLR4, are pattern recognition receptors and signaling molecules in response to bacterial lipoproteins and have been implicated in innate immunity and inflammation. TLR4 physically associates with MD-2, and together with CD14, this complex is responsible for LPS recognition and signaling. In the mouse, TLR4 is expressed by thioglycolate-elicited peritoneal macrophages. Incubation of peritoneal macrophages with LPS results in down regulation of surface TLR4/MD-2. The TLR4 gene is defective in C3H/HeJ and C57BL/10ScCr mice, both of which have been well characterized as hyporesponders to LPS.

The MTS510 monoclonal antibody co-immunoprecipitates MD-2 (~30 kDa) and TLR4 (~100 kDa), and preferentially reacts with TLR4 that is associated with MD-2. In comparison, binding of the UT41 monoclonal antibody occurs with and without formation of the TLR4/MD-2 complex. Please contact eBioscience Technical Support for further information.

Applications Reported: This MTS510 antibody has been reported for use in flow cytometric analysis.

Applications Tested: This MTS510 antibody has been tested by flow cytometric analysis of mouse bone marrow derived dendritic cells. This can be used at less than or equal to 0.5 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁴ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Super Bright 436 can be excited with the violet laser line (405 nm) and emits at 436 nm. We recommend using a 450/50

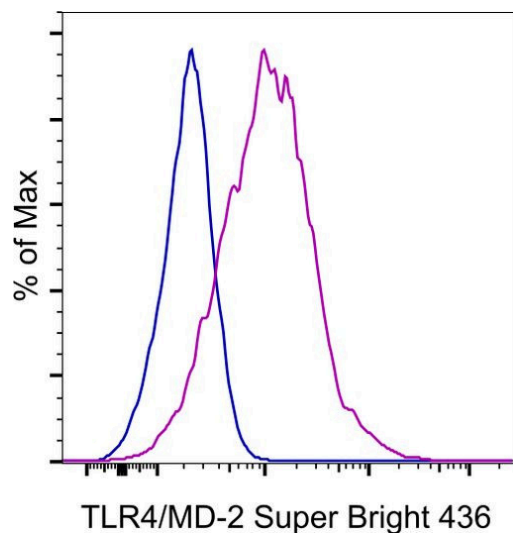
bandpass filter, or equivalent. Please make sure that your instrument is capable of detecting this fluorochrome.

When using two or more Super Bright dye-conjugated antibodies in a staining panel, it is recommended to use Super Bright Complete Staining Buffer (Product # SB-4401) to minimize any non-specific polymer interactions. Please refer to the datasheet for Super Bright Staining Buffer for more information.

Excitation: 405 nm; Emission: 436 nm; Laser: Violet Laser

Super Bright Polymer Dyes are sold under license from Becton, Dickinson and Company.

Product Images For TLR4/MD-2 Complex Monoclonal Antibody (MTS510), Super Bright™ 436, eBioscience™



TLR4/MD-2 Complex Antibody (62-9924-80) in Flow

Swiss Webster mouse bone marrow-derived dendritic cells were stained with 0.25 µg of Rat IgG2a kappa Isotype Control, Super Bright 436 (Product # 62-4321-82) (blue histogram) or 0.25 µg of TLR4/MD-2 Monoclonal Antibody, Super Bright 436 (purple histogram). Total viable cells were used for analysis, as determined by Fixable Viability Dye eFluor 780 (Product # 65-0865-18).

[View more figures on thermofisher.com](https://www.thermofisher.com)

4 References

Western Blot (1)

Journal of neuroinflammation

Hydroxychloroquine attenuates neuroinflammation following traumatic brain injury by regulating the TLR4/NF-B signaling pathway.

"Published figure using TLR4/MD-2 Complex monoclonal antibody (Product # 62-9924-82) in Western Blot"

Authors: Hu J,Wang X,Chen X,Fang Y,Chen K,Peng W,Wang Z,Guo K,Tan X,Liang F,Lin L,Xiong Y

Year
2022

Immunocytochemistry (1)

Molecules (Basel, Switzerland)

Lycopene Inhibits Toll-Like Receptor 4-Mediated Expression of Inflammatory Cytokines in House Dust Mite-Stimulated Respiratory Epithelial Cells.

"Published figure using TLR4/MD-2 Complex monoclonal antibody (Product # 62-9924-82) in Immunocytochemistry"

Authors: Choi J,Lim JW,Kim H

Year
2021

Flow Cytometry (1)

The Journal of biological chemistry

Green Tea Polyphenol Epigallocatechin-3-gallate Suppresses Toll-like Receptor 4 Expression via Up-regulation of E3 Ubiquitin-protein Ligase RNF216.

"Published figure using TLR4/MD-2 Complex monoclonal antibody (Product # 62-9924-82) in Flow Cytometry"

Authors: Kumazoe M,Nakamura Y,Yamashita M,Suzuki T,Takamatsu K,Huang Y,Bae J,Yamashita S,Murata M,Yamada S,Shinoda Y,Yamaguchi W,Toyoda Y,Tachibana H

Year
2017

Neutralization (1)

Blood advances

Inflammatory signaling in dengue-infected platelets requires translation and secretion of nonstructural protein 1.

"Published figure using TLR4/MD-2 Complex monoclonal antibody (Product # 62-9924-82) in Neutralization"

Authors: Quirino-Teixeira AC,Rozini SV,Barbosa-Lima G,Coelho DR,Carneiro PH,Mohana-Borges R,Bozza PT,Hottz ED

Year
2020

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