

# TLR4/MD-2 Complex Monoclonal Antibody (MTS510), eBioscience™

Product Details	
Size	100 µg
Species	Mouse
Published Species	Rat, Human, Mouse
Expression System	Rat / IgG2a, kappa
Class	Monoclonal
Type	Antibody
Clone	MTS510
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage Conditions	4° C
RRID	AB_468617

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	1 µg/test	8 Publications
Functional Assay (FN)	Assay-Dependent	3 Publications
Immunohistochemistry (Frozen) (IHC (F))	Assay-Dependent	1 Publication
Immunoprecipitation (IP)	Assay-Dependent	-
Neutralization (Neu)	Assay-Dependent	13 Publications
Immunofluorescence (IF)	-	3 Publications
Immunohistochemistry (IHC)	-	1 Publication
Inhibition Assays (IA)	-	2 Publications
Western Blot (WB)	-	3 Publications

## 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, immunoprecipitation, immunohistology staining of frozen tissue sections and inhibition of LPS-induced cytokine production. (Please use Functional Grade purified MTS510, cat. 16-9924, in functional assays.)

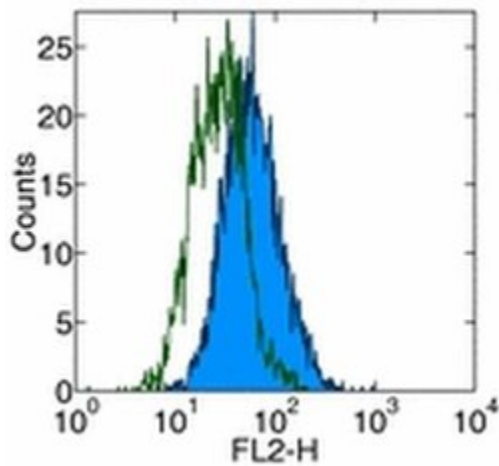
**Applications Tested:** The MTS510 antibody has been tested by flow cytometric analysis of mouse thioglycolate-elicited peritoneal exudate cells. This can be used at less than or equal to 1 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

**Purity:** Greater than 90%, as determined by SDS-PAGE.

**Aggregation:** Less than 10%, as determined by HPLC.

**Filtration:** 0.2 µm post-manufacturing filtered.

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



#### TLR4/MD-2 Complex Antibody (14-9924-82) in Flow

Staining of thioglycolate-induced peritoneal exudate cells (PECs) with Anti-Mouse TLR4/MD-2 Complex PE. Appropriate isotype controls were used (open histogram). Cells in the large scatter population were used for analysis.

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

## Flow Cytometry (8)

### Immunity

#### Chanzyme TRPM7 Mediates the Ca<sup>2+</sup> Influx Essential for Lipopolysaccharide-Induced Toll-Like Receptor 4 Endocytosis and Macrophage Activation.

"Published figure using TLR4/MD-2 Complex monoclonal antibody (Product # 14-9924-82) in Flow Cytometry"

Authors: Schappe MS, Sztayn K, Stremaska ME, Mendu SK, Downs TK, Seegren PV, Mahoney MA, Dixit S, Krupa JK, Stipes EJ, Rogers JS, Adamson SE, Leitinger N, Desai BN

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2018

Journal of immunology (Baltimore, Md. : 1950)

#### Soluble CD83 Inhibits T Cell Activation by Binding to the TLR4/MD-2 Complex on CD14<sup>+</sup> Monocytes.

"14-9924 was used in Flow cytometry/Cell sorting to investigate the mechanism of action underlying the tolerogenic function of soluble CD83."

Authors: Horvatinovich JM, Grogan EW, Norris M, Steinkasserer A, Lemos H, Mellor AL, Tcherepanova IY, Nicolette CA, DeBenedette MA

**Species**  
Human

**Dilution**  
Not Cited

**Year**  
2017

[View more Flow references on thermofisher.com](#)

## Neutralization (13)

### Molecular medicine reports

#### High mobility group box 1 induces calcification of aortic valve interstitial cells via toll-like receptor 4.

"Published figure using TLR4/MD-2 Complex monoclonal antibody (Product # 14-9924-82) in Neutralization"

Authors: Shen W, Zhou J, Wang C, Xu G, Wu Y, Hu Z

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2017

### PloS one

#### Schistosoma japonicum soluble egg antigens attenuate IFN--induced MHC class II expression in RAW 264.7 macrophages.

"14-9924 was used in Blocking experiments to elucidate the innate immune-related molecular events involved in the interaction between S. japonicum and its host."

Authors: Tang GX, Zhou HJ, Xu JW, Xu JM, Ji MJ, Wu HW, Wu GL

**Species**  
Mouse

**Dilution**  
Not Cited

**Year**  
2013

[View more Neu references on thermofisher.com](#)

## More applications with references on thermofisher.com

**FN (3)** **IF (3)** **IA (2)** **IHC (1)** **WB (3)** **IHC (F) (1)**

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