

**MONOCLONAL ANTIBODY TO
MOUSE TOLL-LIKE RECEPTOR 4 (TLR4, CD284) /MD-2
Clone MTS510**



Catalog nr	HM1029 (lot number and expiry date are indicated on the label)
Description	<p>The monoclonal antibody MTS510 reacts with the Toll-like receptor 4 (TLR4, CD284). TLRs are highly conserved throughout evolution and have been implicated in the innate defence to many pathogens. In <i>Drosophila</i> toll is required for the anti-fungal response, while the related 18-wheeler is involved in antibacterial defences. In mammals, TLR identified as type I transmembrane signalling receptors with pattern recognition capabilities, have been implicated in the innate host defence to pathogens.</p> <p>TLR4 has been identified next to MD-2 and CD14 as a receptor that is central to the innate immune response to lipopolysaccharides (LPS) of Gram-negative bacteria.</p> <p>The monoclonal antibody MTS510 reacts preferentially, especially in flow cytometry, with mouse TLR4 that is associated with MD-2. MTS510 is a TLR4 function-blocking antibody that is useful for studies on the role of TLR4 as a receptor for LPS induced cytokine production by TLR4 bearing cells. The antibody was shown to coprecipitate MD-2 (30 kDa) with TLR4 (100 kDa).</p>
Species	Rat IgG _{2a}
Formulation	1 ml (100 µg/ml) 0.2 µm filtered antibody solution in PBS, containing 0.02% sodium azide and 0.1% bovine serum albumin.
Application	The monoclonal antibody MTS510 can be used for flow cytometry, immuno precipitation and immunohistology on frozen sections. The antibody recognizes the mouse TLR4/MD-2 complex and is not useful for detection of TLR4 (CD284) alone. Furthermore the antibody can be used as antagonist for TLR4, it blocks LPS-induced cytokine production.
Use	For immunohistology and flow cytometry dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50. Before use in biological assays, the product must be filter sterilized and depending on the concentration to be used dialyzed against culture medium to remove the sodium azide added. Please inquire for availability of azide free solutions.
Storage and stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hbt is not responsible for any patent infringements that might result with the use of or derivation of this product.
References	<ol style="list-style-type: none">1. Nomura, F et al ; Cutting edge: Endotoxin tolerance in mouse peritoneal macrophages correlate with down-regulation of surface toll-like receptor 4 expression. <i>J Immunol</i> 2000, <i>164</i>: 34712. Akashi, S et al; Cutting edge: Cell surface expression and lipopolysaccharide signalling via the toll-like receptor 4-MD-2 complex on mouse peritoneal macrophages. <i>J Immunol</i> 2000, <i>164</i>: 34713. Tapping, RI et al; toll-like receptor 4, but not toll-like receptor 2, is a signalling receptor for Escherichia and Salmonella lipopolysaccharides. <i>J Immunol</i> 2000, <i>165</i>: 57804. Sato, S et al; Synergy and cross-tolerance between toll-like receptor (TLR)2- and TLR4-mediated signalling pathways. <i>J Immunol</i> 2000, <i>165</i>: 70965. Ortega-Cava, C et al; Strategic compartmentalization of toll-like receptor 4 in the mouse gut. <i>J Immunol</i> 2003, <i>170</i>: 3977
Also available	HM1030 Biotinylated monoclonal antibody against Mouse TLR4 (CD284)/MD-2, clone MTS510