

10-3519: Monoclonal Antibody to Human sMD-2 and sMD-2/TLR4 (Clone : 4H1)(Discontinued)

Clonality :	Monoclonal
Clone Name :	4H1
Application :	IHC,FACS
Reactivity :	Human
Gene :	SNRPD2
Gene ID :	6633
Uniprot ID :	P62316
Format :	Purified
Alternative Name :	Lymphocyte antigen 96, ESOP-1, LY96
Isotype :	Mouse IgG1
Immunogen Information :	Baculovirally expressed His-tagged human MD-2

Description

The monoclonal antibody 10-3519 reacts with soluble MD-2 (sMD-2) and the sMD-2/Toll-like receptor 4 (TLR4, CD284) complex. TLRs belong to a family of proteins that specifically recognizes and senses microbial products. They are highly conserved throughout evolution and act as innate immune recognition receptors against many pathogens. TLR4 is a functional receptor for gram-negative bacterial lipopolysaccharides (LPS). TLR4 associates with MD-2 which is absolutely required for LPS-induced activation of TLR4. MD-2 exists as a cell surface protein in association with TLR4. It also exists as secreted forms consisting of MD-2 monomer and multimers. Circulating sMD-2 is mainly present as a doublet of ~20 and 25 kD, representing differentially glycosylated forms. Unlike TLR4, sMD-2 binds directly LPS without the need of soluble CD14 (sCD14). However, LPS-MD-2 interactions are increased when LPS is pretreated with CD14. Only monomeric sMD-2 is biologically active and able to associate with TLR4 and LPS. sMD-2 circulates in plasma of healthy individuals as a non-active, polymeric protein. In septic plasma, the total amount of sMD-2 was strongly elevated and contained both sMD-2 polymers and monomers. Soluble MD-2 is proposed to be an important mediator of organ inflammation during sepsis. During experimental human endotoxemia, the monomeric and total sMD-2 content in plasma increased with the kinetics of an acute phase protein. This parallels enhanced TLR4 costimulatory activity. In vitro studies revealed that sMD-2 release appears to be restricted to endothelial and dendritic cells. The monoclonal antibody 4H1 reacts with both the monomeric and the polymeric form of sMD-2. In addition, the monoclonal antibody 4H1 is able to inhibit LPS binding to MD-2. It does not cross-react with mouse MD-2.

Product Info

Amount :	2/TLR4 (Clone : 4H1)(Discontinued) / 500 µg
Content :	0.5 mg, 0.2 µm filtered antibody solution in PBS, containing 0.1% bovine serum albumin.
Storage condition :	Product should be stored at 4 °C. Under recommended storage conditions, product is stable for one year.