Technical Data Sheet

Purified NA/LE Mouse Anti-Human Toll-Like Receptor 4

Product Information	
Material Number:	562256
Alternate Name:	TLR4, CD284
Entrez Gene ID:	7099
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	HTA125
Immunogen:	Human TLR4-transfected Ba/F3 cell line
Isotype:	Mouse (BALB/c) IgG2a, ĸ
Reactivity:	QC Testing: Human
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative,
	0.2µm sterile filtered. Endotoxin level is \leq 0.01 EU/µg (\leq 0.001 ng/µg) of
	protein as determined by the LAL assay.

Description

The HTA125 monoclonal antibody specifically binds to the human Toll-like receptor 4 (TLR4), also known as CD284. Toll-like receptors (TLR) are type I transmembrane proteins characterized by an extracellular domain containing leucine-rich repeats and a cytoplasmic domain similar to IL-1R family. In humans, ten TLR have been identified so far. The TLR family acts as a pattern-recognition receptor that is an essential component of pathogen recognition and innate immunity. TLR4 has been identified as the receptor for Gram-negative bacterial lipopolysaccharide (LPS). TLR4 mRNA expression has been found in spleen, placenta, ovary, intestine and lung. Using HTA125, TLR4 protein expression has been detected in monocytes, B cells and T cells in human peripheral blood. The human *TLR4* gene has been mapped to chromosome 9q32. The immunogen used to generate the HTA125 hybridoma was human TLR4-transfected Ba/F3 cells. The HTA125 antibody reportedly blocks LPS-triggered, TLR4-mediated stimulation of cells.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application					
Flow cytometry	Routinely Tested				
Blocking	Reported				
Immunofluorescence	Reported				
Immunoprecipitation	Reported				

Suggested Companion Products

Catalog Number	Name	Size	Clone
551964	Purified Mouse Anti-Human Toll-Like Receptor 4	0.1 mg	HTA125
555571	Purified Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178
554656	Stain Buffer (FBS)	500 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Akashi S, Ogata H, Kirikae F, et al. Regulatory roles for CD14 and phosphatidylinositol in the signaling via toll-like receptor 4-MD-2. *Biochem Biophys Res Commun.* 2000; 268(1):172-177. (Clone-specific: Blocking, Flow cytometry)

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Beutler B. TIr4: central component of the sole mammalian LPS sensor. Curr Opin Immunol. 2000; 12(1):20-26. (Biology)

Rock FL, Hardiman G, Timans JC, Kastelein RA, Bazan JF. A family of human receptors structurally related to Drosophila Toll. Proc Natl Acad Sci U S A. 1998; 95(2):588-593. (Biology)

Shimazu R, Akashi S, Ogata H, et al. MD-2, a molecule that confers lipopolysaccharide responsiveness on Toll-like receptor 4.. J Exp Med. 1999;

189(11):1777-1782. (Immunogen: Blocking, Flow cytometry, Immunofluorescence, Immunoprecipitation)

Zarember KA, Godowski PJ. Tissue expression of human Toll-like receptors and differential regulation of Toll-like receptor mRNAs in leukocytes in response to microbes, their products, and cytokines. J Immunol. 2002; 168(2):554-561. (Biology)

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