


## Anti-Human CD284 (TLR4) Functional Grade Purified

**Catalog Number:** 16-9879

**Also known as:** TLR-4, Toll-like Receptor 4

**RUO: For Research Use Only. Not for use in diagnostic procedures.**

### Product Information

**Contents:** Anti-Human CD284 (TLR4)  
Functional Grade Purified  
 **Catalog Number:** 16-9879  
**Clone:** HT52  
**Concentration:** 1 mg/mL  
**Host/Isotype:** Mouse IgG1  
**Handling Conditions:** Use in Sterile environment.  
**Endotoxin:** Less than 0.001 ng/ug antibody as determined by the LAL assay.



**Formulation:** aqueous buffer, no sodium azide  
**Temperature Limitation:** Store at 2-8°C.

**Batch Code:** Refer to vial

**Use By:** Refer to vial

### Description

The HT52 monoclonal antibody reacts with human Toll-like receptor (TLR) 4. Thus far, at least ten members of the Toll family have been identified in humans. 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 family members, TLR2 and TLR4, are pattern recognition receptors and signaling molecules in response to bacterial lipoproteins; they have been implicated in innate immunity and inflammation. TLR4 physically associates with another molecule called MD-2. Together with CD14, this complex is responsible for LPS recognition and signaling. TLR4 is expressed by peripheral blood monocytes. Most TLR cell surface expression, especially TLR1 and TLR4, occurs at low levels on monocytes and at even lower levels on other cell types, including granulocytes and immature dendritic cells (iDCs). Furthermore, a relatively high degree of variability in TLR surface expression has been reported among normal donors.

The HT52 antibody has been reported to exhibit neutralizing activity.

### Applications Reported

This HT52 antibody has been reported for use in functional assays and flow cytometric analysis.

### Applications Tested

This HT52 antibody has been tested by flow cytometric analysis of TLR-4-transfected cells. This can be used at less than or equal to 0.25 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.

### References

de Graaf R, Kloppenburg G, et al. 2006. Human heat shock protein 60 stimulates vascular smooth muscle cell proliferation through Toll-like receptors 2 and 4. *Microbes Infect.* 8(7):1859-65.

Mirlashari MR and Lyberg T. 2003. Expression and involvement of Toll-like receptors (TLR)2, TLR4, and CD14 in monocyte TNF-alpha production induced by lipopolysaccharides from *Neisseria meningitidis*. *Med Sci Monit.* 9(8):BR316-24.

Akashi, S., H. Ogata, et al. 2000. Regulatory roles for CD14 and phosphatidylinositol in the signaling via toll-like receptor 4-MD-2. *Biochem Biophys Res Commun.* 268(1): 172-7.

Tabeta, K., K. Yamazaki, et al. 2000. Toll-like receptors confer responsiveness to lipopolysaccharide from *Porphyromonas gingivalis* in human gingival fibroblasts. *Infect Immun.* 68(6): 3731-5.

Shimazu, R., S. Akashi, et al. 1999. MD-2, a molecule that confers lipopolysaccharide responsiveness on Toll-like receptor 4. *J Exp Med.* 189(11): 1777-82.

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### Related Products

16-4714 Mouse IgG1 K Isotype Control Functional Grade Purified (P3.6.2.8.1)