MAb hTLR1-FITC

Purified monoclonal antibody to human TLR1 labeled with FITC

Catalog # mab-htlr1f

For research use only, not for diagnostic or therapeutic use

Version # 09C18-MT

PRODUCT INFORMATION

Content

100 µg purified monoclonal anti-hTLR1 antibody labeled with FITC (MAb-hTLR1-FITC), provided lyophilized

Clone: GD2.F4
Isotype: Mouse IgG1
Formulation: PBS pH 7.4, 0.02% sodium azide, 1% bovine serum albumin

Antibody resuspension

Add 1 ml of sterile water to obtain a concentration of 0.1 mg/ml.

Storage

- Product is shipped at room temperature. Store lyophilized MAb-hTLR1-FITC at -20˚C. Product is stable for 1 year. Protect from light.
- Resuspended MAb-hTLR1-FITC should be aliquoted and stored at -20˚C. Protect from light. Resuspended product is stable for 1 year when stored correctly.

Description

MAb hTLR1-FITC (GD2.F4) is a monoclonal antibody specific for human Toll-like receptor 1 (TLR1, CD281) labeled with FITC. MAb hTLR1-FITC has been tested by flow cytometric analysis of human peripheral blood leukocytes.

BACKGROUND

Toll-Like receptors (TLRs) play a critical role in early innate immunity to invading pathogens by sensing microorganisms. These evolutionary conserved receptors recognize highly conserved structural motifs only expressed by microbial pathogens, called pathogen-associated microbial patterns (PAMPs). Stimulation of TLRs by PAMPs initiates a signaling cascade leading to the secretion of proinflammatory cytokines following NF-κB activation. To date ten human and twelve murine TLRs have been characterized, TLR1 to TLR10 in humans, and TLR1 to TLR9, TLR11, TLR12 (aka TLR11) and TLR13 in mice, the homolog of TLR10 being a pseudogene.

TLR1 is predominantly expressed in the spleen and peripheral blood cells. No direct ligands have been identified so far for TLR1, and its function remains unclear. TLR1 seems to act as a coreceptor for TLR2. TLR1 and TLR2 form heterodimeric complexes on the cell surface and in the cytosol[1]. TLR1 and TLR2 were shown to cooperate in recognizing *Borrelia burgdorferi* outer-surface protein A lipoprotein OspA[2]. They also interact to recognize the 19-kD mycobacterial lipopeptide and several synthetic triacylated lipopeptides[3], but not diacylated lipopeptides. This suggests that TLR1 is able to discriminate among lipoproteins by recognizing the lipid configuration[4].

APPLICATIONS

MAb hTLR1-FITC (GD2.F4) can be used for flow cytometry. The utility of this antibody for other applications has not been determined.

Use

For flow cytometry, it is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:100.

References

1. Sandor F. *et al.*, 2003. Importance of extra- and intracellular domains of TLR1 and TLR2 in NFkappa B signaling. J Cell Biol. 2003 Sep 15;162(6):1099-110.
2. Alexopoulou L. *et al.,* 2002. Hyporesponsiveness to vaccination with Borrelia burgdorferi OspA in humans and in TLR1- and TLR2-deficient mice. Nat Med. 8(8):878-84.
3. Takeuchi O. *et al.*, 2002. Cutting edge: role of toll-like receptor 1 in mediating immune response to microbial lipoproteins. J Immunol, 169(1):10-4.
4. Takeuchi O. *et al.*, 2001. Discrimination of bacterial lipoproteins by Toll-like receptor 6. Int Immunol, 13(7):933-40.

RELATED PRODUCTS

Product	Catalog Code
MAb hTLR1 (monoclonal)	mab-htlr1
PAb hTLR1 (polyclonal)	pab-htlr1
293/hTLR1	293-htlr1
pDUO-hTLR1/2	pduo-htlr12
THP1-Blue™ Cells	thp-sp

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