MAb-mTLR2

Monoclonal antibody to mouse TLR2

Catalog # mab2-mtlr2

http://www.invivogen.com/mab-mtrl2

For research use only, not for diagnostic or therapeutic use

Version # 17F16-MM

PRODUCT INFORMATION

Content

100 µg of MAb-mTLR2 provided azide-free and lyophilized

Target: Mouse TLR2
Species reactivity: Reacts with human and mouse TLR2
Clonality: Monoclonal antibody
Clone: T2.5
Isotype: Mouse IgG1
Source: CHO cells
Formulation: 0.2 mm filtered solution in sodium phosphate buffer with glycine, saccharose and stabilizing agents

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-mTLR2 at -20 °C. Product is stable for 1 year.
- Resuspended MAb-mTLR2 is stable up to 1 year when stored at -20 °C.

Quality control

- This product has been validated for neutralization and flow cytometry.
- The complete sequence of this antibody has been verified.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

BACKGROUND

TLR2 is involved in the recognition of a wide array of microbial molecules. TLR2 recognizes peptidoglycan, lipoteichoic acid and lipoprotein from gram-positive bacteria, lipoarabinomannan from mycobacteria, and zymosan from yeast cell wall. TLR2 cooperates with TLR6 in response to diacylated mycoplasmal lipopeptide[1], and associates with TLR1 to recognize triacylated lipopetides[2, 3]. Simultaneous expression of the extracellular and intracellular domains of both TLR1 and TLR2 is essential for ligand recognition and subsequent ligand-induced signal activation[4]. Furthermore, pathogen recognition by TLR2 is strongly enhanced by CD14[5].

1. Girard R. *et al.*, 2003. Lipopolysaccharides from Legionella and Rhizobium stimulate mouse bone marrow granulocytes via Toll-like receptor 2. J Cell Sci. 116:293-302. **2. Ozinsky A. *et al.*, 2000. T**he repertoire for pattern recognition of pathogens by the innate immune system is defined by cooperation between toll-like receptors. PNAS 97:13766-71. **3. Thakran S. *et al.*, 2008.** Identification of Francisella tularensis lipoproteins that stimulate the Toll-like receptor (TLR) 2/TLR1 heterodimer. J Biol Chem 283: 3751-9. **4. Sandor F. *et al.*, 2003.** Importance of extra- and intracellular domains of TLR1 and TLR2 in NFkB signaling. J Cell Biol. 162: 1099-10. **5. Lotz S. *et al.*, 2004.** Highly purified lipoteichoic acid activates neutrophil granulocytes and delays their spontaneous apoptosis via CD14 and TLR2. J Leukoc Biol. 75(3):467-77. **6. Leemans JC. *et al.*, 2005.** Renal-associated TLR2 mediates ischemia/reperfusion injury in the kidney. J Clin Invest. 115(10):2894-903.

DESCRIPTION

MAb-mTLR2 (T2.5) is a monoclonal antibody that reacts with mouse Toll-like receptor 2 (TLR2, CD282). MAb-mTLR2 is an antagonistic antibody. The antibody is cross reactive with human TLR2.

MAb-mTLR2 was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography.

APPLICATIONS

MAb-mTLR2 (T2.5) can be used for flow cytometry and neutralization as described below. MAb-mTLR2 can also be used for immunohistology on frozen tissue sections and immunoprecipitation[6].

Neutralization

The exact concentration of antibody required to neutralize murine TLR2 activity is dependent on the cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using FSL-1 and HEK-Blue™ TLR2 cells (HEK239 cells expressing TLR2 and an NF-κB-inducible SEAP reporter gene.

Procedure for neutralization using HEK-Blue™ TLR2 cells

1. Prepare a cell suspension at 500,000 cells/ml.
2. Add 100 µl of MAb-mTLR2 or control antibody (0.1-10 µg/ml final) per well of a 96-well plate.
Note: *We recommend using Mouse Control IgG1 (which targets E. coli β-galactosidase) as a negative control antibody.*
3. Add 100 µl of cell suspension per well.
4. Incubate 1 hour at 37 °C.
5. Add 50 µl FSL-1 (1 ng/ml final).
6. Incubate overnight at 37 °C.
7. Add 20 µl of supernatant to 180 µl QUANTI-Blue™ in a 96-well plate.
8. Incubate 1-3 hours at 37 °C.
9. Assess SEAP levels with the naked eye or spectrophotometrically by reading the optical density (OD) at 655 nm.

Flow Cytometry

MAb-mTLR2 (TL2.5) was used at 500-2000 ng/10^6 cells with a PE goat anti-mouse IgG secondary antibody for indirect immunofluorescence staining of HEK-Blue™ mTLR2 cells by flow cytometry.

RELATED PRODUCTS

Product	Catalog Code
Mouse Control IgG1	mabg1-ctrlm
FSL-1	tlrl-fsl
HEK-Blue™ mTLR2 Cells	hkb-mtlr2

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