Anti-mTLR2-IgG

Neutralizing and detection IgG monoclonal antibody to murine TLR2

Catalog code: mabg-mtlr2-2

https://www.invivogen.com/anti-mtlr2-igg

For research use only

Version 23L11-MM

PRODUCT INFORMATION

Contents

• 2 x 100 µg purified Anti-mTLR2-IgG antibody, provided azide-free and lyophilized

Target: Murine Toll-like receptor 2 (mTLR2)
Specificity: No cross-reactivity with human TLR2
Clone: C9A12
Isotype: Mouse IgG2a
Light chain type: Kappa
Formulation: 0.2 µm filtered solution in a sodium phosphate buffer with saccharose, glycine, and stabilizing agents
Applications: Block/neutralize; Flow cytometry

Antibody resuspension (0.1 mg/ml)

Add 1 ml of sterile water per 100 µg vial.

Storage and stability

- Product is shipped at room temperature. Upon receipt, store lyophilized antibody at -20 °C.
- Reconstituted antibody is stable for 1 month at 4 °C and for 1 year at -20 °C. Avoid repeated freeze-thaw cycles.

Quality Control:

- This product has been validated for neutralization using cellular assays.
- Binding of Anti-mTLR2-IgG to mTLR2 on cells has been validated using flow cytometry.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

BACKGROUND

TLR2 plays an essential role in detecting a diverse range of microbial pathogen-associated molecular patterns (PAMPs) from bacteria, fungi, and parasites, including lipoproteins, lipoteichoic acid, lipoarabinomannan, and chitin[1]. A number of viruses have also been shown to interact directly with TLR2, including HIV and herpes simplex virus[1,2]. TLR2 forms a heterodimer on the cell surface with either of its co-receptors, TLR1 or TLR6, which is crucial for signaling and ligand specificity. The TLR2/TLR1 and TLR2/TLR6 heterodimers specifically bind lipoproteins depending on whether they are tri- or diacylated, respectively[1]. Their activation triggers pro-inflammatory responses[3].

1. Oliveira-Nascimento L. *et al.*, 2012. The Role of TLR2 in Infection and Immunity. Front Immunol 3:79. **2. Henrick B.M. *et al.*, 2015.** HIV-1 Structural Proteins Serve as PAMPs for TLR2 Heterodimers Significantly Increasing Infection and Innate Immune Activation. Front Immunol 6:426. **3. Li J. *et al.*, 2013.** Evolving Bacterial Envelopes and Plasticity of TLR2-Dependent Responses: Basic Research and Translational Opportunities. Front Immunol 4:347.

DESCRIPTION

Anti-mTLR2-IgG is a fully mouse monoclonal antibody specific for murine TLR2 (CD282). This autoantibody was raised in mice by a proprietary method designed to induce the production of anti-TLR2 antibodies directly in the animal. Anti-mTLR2-IgG has been selected for its ability to efficiently neutralize the biological activity of mTLR2. This antibody has been produced in hybridomas and purified by affinity chromatography.

APPLICATIONS

Neutralization

The exact concentration of antibody required to neutralize mTLR2 activity is dependent on the TLR2 agonist used and its concentration, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using the ligand FSL-1 and HEK-Blue™ mTLR2 cells. These cells are engineered HEK293 cells stably expressing mTLR2 and an NF-κB-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene. For more information, visit www.invivogen.com/hek-blue-tlr2.

Procedure for neutralization using HEK-Blue™ mTLR2 cells

1. Add 100 µl of Anti-mTLR2-IgG or control antibody (100 ng/ml-10 µg/ml final concentration) per well.
Note: We recommend using Mouse IgG2a Control (which targets E. coli β-galactosidase) as a negative control antibody.
2. Add 100 µl of HEK-Blue™ mTLR2 cell suspension (~50,000 cells) per well.
3. Incubate for 1 hour at 37°C in a 5% CO_2 incubator.
4. Add 50 µl FSL-1 (1 ng/ml final concentration).
5. Incubate the plate at 37°C in a 5% CO_2 incubator for 18-24 h.
6. Monitor SEAP production using a SEAP detection assay such as QUANTI-Blue™ Solution.

Flow Cytometry

This antibody was used at 500-2000 ng/10^6 cells with a goat F(ab')2 anti-murine IgG-FITC secondary antibody for indirect immunofluorescence staining of HEK-Blue™ mTLR2 cells.

RELATED PRODUCTS

Product	Description	Cat.Code
HEK-Blue™ mTLR2 Cells	TLR2 reporter cells	hkb-mtlr2
Mouse IgG2a Control	Isotype control antibody	mabg2a-ctrlm
FSL-1	TLR2 ligand	tlrl-fsl
QUANTI-Blue™ Solution	SEAP detection reagent	rep-qbs

TECHNICAL SUPPORT
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