

# Anti-mTLR5-IgG

Neutralizing IgG monoclonal antibody to murine TLR5

Catalog code: mabg-mtlr5-2

<https://www.invivogen.com/anti-mtlr5-igg>

For research use only, not for diagnostic or therapeutic use

Version 23L11-MM

## PRODUCT INFORMATION

### Contents

• 2 x 100 µg of purified anti-mTLR5-IgG antibody, provided azide-free and lyophilized

**Specificity:** Murine TLR5 (mTLR5)

**Source:** Hybridoma cells

**Clone:** Q23D11

**Isotype:** Rat IgG2a

**Light chain type:** Kappa

**Clonality:** Monoclonal

**Purification:** By affinity chromatography

**Formulation:** 0.2 µm filtered solution in a sodium phosphate buffer with saccharose, glycine, and stabilizing agents

### 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 at -20°C.
- Reconstituted antibody is stable for 1 month when stored at 4 °C and for 1 year when stored at -20 °C. Avoid repeated freeze-thaw cycles.

### Quality control

- This product has been validated for neutralization.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) is confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

## BACKGROUND

Toll-like receptor 5 (TLR5) recognizes flagellin from both Gram-positive and Gram-negative bacteria. Activation of the receptor stimulates the production of proinflammatory cytokines, such as TNF- $\alpha$ , through signaling via the adaptor protein MyD88 and the serine kinase IRAK1,2. TLR5 can generate a proinflammatory signal as a homodimer suggesting that it might be the only TLR participating in flagellin recognition<sup>2</sup>. However, TLR5 may require the presence of a co-receptor or adaptor molecule for efficient ligand recognition and/or signaling<sup>3</sup>.

**1. Gewirtz AT, et al., 2001.** Cutting edge: bacterial flagellin activates basolaterally expressed TLR5 to induce epithelial proinflammatory gene expression. *J Immunol.* 167(4):1882-5. **2. Hayashi F, et al., 2001.** The innate immune response to bacterial flagellin is mediated by Toll-like receptor 5. *Nature*, 410(6832):1099-103. **3. Tallant T, et al., 2004.** Flagellin acting via TLR5 is the major activator of key signaling pathways leading to NF-kappa B and proinflammatory gene program activation in intestinal epithelial cells. *BMC Microbiol.* 4(1):33.

## DESCRIPTION

Anti-mTLR5-IgG can be used for neutralization of mTLR5, it blocks cellular activation induced by agonists that are recognized by mTLR5, such as flagellin. It was produced in hybridoma cells and purified by affinity chromatography. Anti-mTLR5-IgG has been selected for its ability to efficiently neutralize the biological activity of mTLR5. The neutralizing activity was determined using HEK-Blue™ mTLR5 cells.

## APPLICATIONS

Anti-mTLR5-IgG can be used for neutralization as described below.

### Neutralization

The exact concentration of antibody required to neutralize mTLR5 activity is dependent on the cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using **FLA-ST Ultrapure** (flagellin from *S. typhimurium*) and **HEK-Blue™ mTLR5 cells** (HEK239 cells expressing mTLR5 and an NF- $\kappa$ B-inducible secreted embryonic alkaline phosphatase (SEAP) reporter gene. For more information, visit [www.invivogen.com/hek-blue-trlr5](http://www.invivogen.com/hek-blue-trlr5).

### Procedure for neutralization using HEK-Blue™ mTLR5 cells

1. Add 100 µl of Anti-mTLR5-IgG or control antibody (20 ng/ml-20 µg/ml final concentration) per well.

*Note: We recommend using Rat IgG2a Control (which targets E. coli  $\beta$ -galactosidase) as a negative control antibody.*

3. Add 100 µl of **HEK-Blue™ mTLR5 cell** suspension (~50,000 cells) per well.

4. Incubate for 1 hour at 37°C in a 5% CO<sub>2</sub> incubator.

5. Add 50 µl **Rec FLA-ST** (3 pg/ml final concentration).

6. Incubate the plate at 37°C in a 5% CO<sub>2</sub> incubator for 18-24 h.

7. Monitor SEAP production using a SEAP detection assay such as **QUANTI-Blue™ Solution**.

## RELATED PRODUCTS

Product	Description	Cat.Code
FLA-ST Ultrapure	TLR5 agonist	tlrl-epstfla
HEK-Blue™ mTLR5 Cells	mTLR5 reporter cells	hkb-htlr5
QUANTI-Blue™ Solution	SEAP detection reagent	rep-qbs
Rat IgG2a Control	Isotype control	mabg2a-ctrlr
Rec FLA-ST	Recombinant flagellin	tlrl-flic-50

### TECHNICAL SUPPORT

InvivoGen USA (Toll-Free): 888-457-5873

InvivoGen USA (International): +1 (858) 457-5873

InvivoGen Europe: +33 (0) 5-62-71-69-39

InvivoGen Asia: +852 3622-3480

E-mail: [info@invivogen.com](mailto:info@invivogen.com)

