

Anti-hTLR1-IgG

Neutralizing monoclonal antibody against human TLR1

Catalog code: mabg-htlr1-2

<https://www.invivogen.com/anti-htlr1-igg>

For research use only, not for diagnostic or therapeutic use

Version 23L11-MM

PRODUCT INFORMATION

Contents

• 2 x 100 µg of purified anti-hTLR1-IgG antibody, provided azide-free and lyophilized

Specificity: Human TLR1 (hTLR1)

Source: Hybridoma cells

Clone: H2G2

Isotype: Mouse IgG1

Light chain type: Kappa

Clonality: Monoclonal

Purification: By affinity chromatography

Formulation: 0.2 µm filtered solution in a sodium phosphate buffer with glycine, saccharose, 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) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

BACKGROUND

Toll-like receptor 1 (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 cytosol¹. TLR1 and TLR2 were shown to cooperate in recognizing *Borrelia burgdorferi* outer-surface protein A lipoprotein OspA². They also interact to recognize the 19-kD mycobacterial lipopeptide and several synthetic triacylated lipopeptides³, but not diacylated lipopeptides. This suggests that TLR1 is able to discriminate among lipoproteins by recognizing the lipid configuration⁴.

1. Sandor F. *et al.*, 2003. Importance of extra- and intracellular domains of TLR1 and TLR2 in NFκappa B signaling. *J Cell Biol.* 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.

DESCRIPTION

Anti-hTLR1-IgG can be used for neutralization of hTLR1, it blocks cellular activation induced by agonists that are recognized by TLR1 and TLR2, such as Pam3CSK4. Although this product has not been tested for use in other applications, this does not necessarily exclude its use in other techniques, such as flow cytometry.

APPLICATIONS

Anti-hTLR1-IgG can be used for neutralization as described below.

Neutralization

The exact concentration of antibody required to neutralize hTLR1 activity is dependent on the cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using Pam3CSK4 and HEK-Blue™ hTLR2 cells, HEK239 cells expressing hTLR2, human CD14 and an NF-κB-inducible secreted embryonic alkaline phosphatase (SEAP) reporter gene. These cells express endogenous levels of human TLR1 and TLR6. For more information, visit www.invivogen.com/hek-blue-trl2.

Procedure for neutralization using HEK-Blue™ hTLR2 cells

1. Add 50 µl of Anti-hTLR1-IgG or control antibody (10 ng/ml-10 µg/ml final concentration) per well of a 96-well plate.
Note: We recommend using Mouse IgG1 Control (which targets E. coli β-galactosidase) as a negative control antibody.
2. Add 100 µl of HEK-Blue™ hTLR2 suspension (~50,000 cells) per well.
4. Incubate for 1 hour at 37°C in a 5% CO₂ incubator.
5. Add 50 µl Pam3CSK4 (0.1-1 ng/ml final concentration).
6. Incubate the plate at 37°C in a 5% CO₂ 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
Pam3CSK4	TLR2 agonist	tlr1-pms
HEK-Blue™ hTLR2 Cells	hTLR2 reporter cells	hkb-htlr2
Mouse Control IgG1	Isotype control	mabg1-ctrlm
QUANTI-Blue™ Solution	SEAP detection reagent	rep-qbs

TECHNICAL SUPPORT

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