

Anti-hTLR6-IgG

Monoclonal IgG antibody against human TLR6

Catalog # mabg-htlr6

For research use only, not for diagnostic or therapeutic use

Version # 15B24-MM

PRODUCT INFORMATION

Content

100 µg purified monoclonal anti-hTLR6 IgG antibody (anti-hTLR6-IgG), provided lyophilized

Clone: C5C8

Isotype: Mouse IgG1

Formulation: PBS pH 7.4

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 anti-hTLR6-IgG at -20°C. Lyophilized anti-hTLR6-IgG is stable for at least 1 year when properly stored.

- Resuspended anti-hTLR6-IgG is stable for 1 month at 4°C and for 1 year when aliquoted and stored at -20°C.

Quality control

- The absence of bacterial contamination (e.g. lipoproteins and peptidoglycans) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

- The antibody has been validated for neutralization using HEK-Blue™ TLR cells.

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.

TLR6, which is closely related to TLR1, is expressed predominantly in spleen, thymus, ovary and lung¹. TLR6 cooperates with TLR2 to recognize diacylated lipoproteins (LPs) found in mycoplasma but is not required in the recognition of triacylated LPs found in bacteria². This suggests that TLR6 is able to discriminate between the N-terminal lipoylated structures of LPs derived from mycoplasma and bacteria. TLR6 collaboration with TLR2 is essential for the recognition and signal transduction of diacylated LPs, such as MALP-2 and FSL-1^{2,3}, as well as heat-killed mycoplasma, indicating that TLR6 and TLR2 play a central role in recognizing mycoplasma².

1. **Takeuchi O. et al., 1999.** TLR6: A novel member of an expanding toll-like receptor family. *Gene*. 231(1-2):59-65. 2. **Takeuchi O. et al., 2001.** Discrimination of bacterial lipoproteins by Toll-like receptor 6. *Int Immunol*, 13(7):933-40. 3. **Fujita M. et al., 2003.** Involvement of leucine residues at positions 107, 112, and 115 in a leucine-rich repeat motif of human Toll-like receptor 2 in the recognition of diacylated lipoproteins and lipopeptides and *Staphylococcus aureus* peptidoglycans. *J Immunol*. 171(7):3675-83.

DESCRIPTION

Anti-hTLR6-IgG (C5C8) is a monoclonal IgG isotype 1 antibody specific for human Toll-like receptor 6 (hTLR6, CD286).

APPLICATION

Anti-hTLR6-IgG can be used for neutralization of hTLR6, it blocks cellular activation induced by agonists that are recognized by TLR6 and TLR2, such as FSL-1. This product has not been tested for use in other applications.

Application tested

Anti-hTLR6-IgG has been tested in neutralizing experiments. Neutralization experiments were performed in cells that naturally express or were transfected to express human TLR6 and TLR2, such as HEK293 or THP1 cells. These cells were further transfected with a plasmid that expresses a NF-κB-inducible reporter gene, such as pNiFty2-SEAP which expresses the secreted embryonic alkaline phosphatase (SEAP) reporter gene. Transfected cells were incubated with 10-1000 ng/ml anti-hTLR6-IgG (C5C8) and a control MAb TLR for 1 hour prior to the addition of 1 ng/ml FSL-1. Neutralization of hTLR6 signaling by anti-hTLR6-IgG was determined after 24 hour incubation by assessing NF-κB-induced SEAP production using HEK-Blue™ Detection. HEK-Blue™ Detection is a SEAP detection cell culture medium that turns blue following TLR stimulation but remains pink if neutralization occurs. SEAP levels can be assessed by the naked eye or spectrophotometrically by reading the OD at 655 nm.

RELATED PRODUCTS

Product	Catalog Code
293/hTLR2/6	293-htlr2/6
FSL-1	tlrl-fsl
HEK-Blue™ hTLR2 cells	hkb-htlr2
HEK-Blue™ Detection	hb-det-1
PAb hTLR6 (polyclonal)	pab-htlr6
pDUO-hTLR6/TLR2	pduo-htlr6tlr2
pNiFty-SEAP	pnifty-seap

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