

Anti-hCD40L-IgG

Neutralizing monoclonal antibody against human CD40L

Catalog # mabg-h40l-3

For research use only, not for diagnostic or therapeutic use

Version # 15C03-MM

PRODUCT INFORMATION

Content 3 x 100 µg purified anti-hCD40L-IgG antibody, provided azide-free and lyophilized

Target: natural and recombinant human CD40 Ligand (CD40L)

Clone: 13H5

Isotype: Mouse IgG2b

Immunogen: Human CD40L protein expressed in Swiss mice following DNA immunization

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

Antibody resuspension

Add 1 ml of sterile water per vial to obtain a concentration of 0.1 mg/ml.

Storage

- Product is shipped at room temperature. Store lyophilized antibody at -20 °C. Product is stable for at least 1 year.
- Reconstituted antibody is stable 1 month when stored at 4 °C and for 1 year when aliquoted and 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

CD40 ligand (CD40L) is a member of the tumor necrosis factor (TNF) family of cell surface interaction molecules. It is mainly expressed in CD4⁺-T cells and interacts with CD40 on antigen-presenting cells to regulate both humoral and cellular immune responses. CD40L-CD40 interactions are thought to play an important role in the pathogenesis of various diseases, including AIDS, Alzheimer's disease, diabetes, and rheumatoid arthritis^{1,2}.

1. Seijkens T. *et al.*, 2013. CD40-CD40L: Linking pancreatic, adipose tissue and vascular inflammation in type 2 diabetes and its complications. Diabetes and Vascular Disease Research. 10: 115 - 122. 2. Daoussis D. *et al.*, 2004. Targeting CD40L: a promising therapeutic approach. Clin Diagn Lab Immunol. 11(4):635-41.

DESCRIPTION

Anti-hCD40L-IgG is a monoclonal antibody specific for human CD40 ligand (hCD40L). This antibody has been selected for its ability to efficiently neutralize the biological activity of hCD40L. Anti-hCD40L-IgG is produced in hybridomas and purified by affinity chromatography.

APPLICATIONS

Anti-hCD40L-IgG is a neutralizing antibody, it blocks hCD40L-induced cellular activation. Other applications have not been tested.

Neutralization

The exact concentration of antibody required to neutralize hCD40L activity is dependent on the cytokine concentration, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using recombinant hCD40L and HEK-Blue™ CD40L cells. These cells are HEK293 cells stably expressing the human CD40L gene, and an NF-κB-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene.

Anti-hCD40L-IgG at 10 ng-1 µg/ml and a negative control antibody (e.g. Mouse IgG2b Control which targets *E. coli* β-galactosidase) were incubated with recombinant hCD40L at 10-30 ng/ml for 30 min prior to the addition of the HEK-Blue™ CD40L cells. Neutralization of CD40L-induced signaling by anti-hCD40L-IgG was determined after a 24-hour incubation by assessing SEAP production using QUANTI-Blue™, a SEAP detection reagent. QUANTI-Blue™ turns blue following cytokine stimulation but remains pink if neutralization occurs. SEAP levels can be assessed by the naked eye or spectrophotometrically by reading the optical density at 620-655 nm.

RELATED PRODUCTS

Product	Catalog Code
HEK-Blue™ CD40L Cells	hkb-cd40
Mouse IgG2b Control	mabg2b-ctrlm
QUANTI-Blue™	rep-qb1
Recombinant human CD40L	rhd-cd40l

TECHNICAL SUPPORT

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