

Anti-hIL-13-IgA

Neutralizing IgA monoclonal antibody to human interleukin 13

Catalog # maba-hil13

For research use only, not for diagnostic or therapeutic use

Version # 08D29-MM

PRODUCT INFORMATION

Content

100 µg purified anti-hIL-13-IgA antibody, provided azide-free and lyophilized

Clone: H7WM207

Isotype: Human IgA2

Formulation: 0.2 µm filtered solution in PBS with 5% saccharose

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 antibody at -20°C. Product is stable for 6 months.

- Reconstituted antibody is stable 1 month when stored at 4°C and 6 months when aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles.

Description

Anti-hIL-13-IgA is a chimeric monoclonal antibody specific for human interleukin 13 (hIL-13). It was generated by combining the constant domains of the human IgA molecule with murine variable regions. Anti-hIL-13-IgA has been selected for its ability to efficiently neutralize the biological activity of hIL-13. The neutralizing activity of this IgA antibody was determined using InvivoGen's HEK-Blue™ IL-4/IL-13 Cells.

BACKGROUND

Interleukin 13 (IL-13) is a cytokine produced by activated T cells. IL-13 inhibits proinflammatory cytokine production and stimulates antibody production. The biological functions of IL-13 overlap with those of IL-4. In non-hematopoietic cells, IL-4 and IL-13 bind a receptor complex composed of IL-4R α and IL-13R α 1. Upon binding, the receptor complex activates the receptor-associated Janus kinase (JAK1 and Tyk2) leading to the recruitment of STAT6 and its phosphorylation. Activated STAT6 forms homodimers that translocate to the nucleus where they bind the promoter of responsive genes inducing gene transcription.

APPLICATIONS

Anti-hIL-13-IgA is a neutralizing antibody, it blocks hIL-13-induced cellular activation. It can also be used for flow cytometry.

Neutralization

The exact concentration of antibody required to neutralize hIL-13 activity is dependent on the cytokine concentration, cell type and growth conditions.

InvivoGen has determined the neutralization dose for this antibody using recombinant hIL-13 and HEK-Blue™ IL-4/IL-13 cells. These cells are HEK293 cells stably expressing the human STAT6 gene, and a SEAP (secreted embryonic alkaline phosphatase) reporter gene under the control of the human IFN- β minimal promoter fused to four STAT6 binding sites.

Recombinant hIL-13 at 20-50 ng/ml was incubated with 1 ng-10 µg/ml anti-hIL-13-IgA and a control antibody for 30 min prior to the addition of the HEK-Blue™ IL-4/IL-13 Cells. Neutralization of IL-13-induced signaling by anti-hIL-13-IgA was determined after 24 hour incubation by assessing SEAP production using QUANTI-Blue™. QUANTI-Blue™ is a SEAP detection medium that 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 OD at 620-655 nm.

Flow Cytometry

This antibody was used at 500 ng/10⁶ cells with the goat F(ab')₂ anti-human IgA-FITC secondary antibody for indirect immunofluorescence staining of HEK293 cells transiently expressing hIL-13 by flow cytometry.

RELATED PRODUCTS

Product	Catalog Code
HEK-Blue™ IL-4/IL-13 Cells	hkb-stat6
Recombinant human IL-13	hil-13
QUANTI-Blue™	rep-qb1
Control IgA2	maba2-ctrl
Goat F(ab') ₂ Anti-Human IgA - Biotin	chiga-biot
Goat F(ab') ₂ Anti-Human IgA - FITC	chiga-fitc
Goat F(ab') ₂ IgG Isotype Control - FITC	cgig-fitc

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