

Anti-hIL-18-IgG

Neutralizing IgG monoclonal antibody to human interleukin 18

Catalog # mabg-hil18-3

<http://www.invivogen.com/anti-hil18-igg>

For research use only, not for diagnostic or therapeutic use

Version # 17F29-MM

PRODUCT INFORMATION

Content

3 x 100 µg purified anti-hIL-18-IgG antibody, provided azide-free and lyophilized

Target: natural and recombinant human interleukin 18 (hIL-18)

Clonality: Monoclonal antibody

Clone: C210

Isotype: Human IgG1

Source: CHO cells

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

Purity: Purified by affinity chromatography with protein G

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 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

Interleukin 18 (IL-18; formerly called interferon-γ inducing factor) is a pro-inflammatory cytokine that causes a wide variety of biological effects associated with infection, inflammation and autoimmune processes^{1,2}. More specifically, IL-18 induces IFN-γ production and contributes to T-helper 1 (Th1) cell polarization. IL-18 is produced by macrophages and other cells, as a proprotein which is proteolytically processed to its active form by caspase 1, an enzyme that is activated within the inflammasome multiprotein complex. IL-18 binds to an heterodimeric receptor consisting of IL-18R and IL-18 receptor accessory protein (IL-18RAP). Upon binding, IL-18 activates NF-κB and AP-1 via signaling pathways that involve IRAK and TRAF-6^{3,4}.

1. Arend W. *et al.*, 2008. IL-1, IL-18, and IL-33 families of cytokines. *Immunol Rev.* 223:20-38. 2. Dinarello CA. *et al.*, 1998. Overview of interleukin-18: more than an interferon-gamma inducing factor. *J Leukoc Biol.* 63(6):658-64. 3. Gracie JA. *et al.*, 2003. Interleukin-18. *J Leukoc Biol.* 3(2):213-24. 4. Kojima H. *et al.*, 1998. Interleukin-18 activates the IRAK-TRAF6 pathway in mouse EL-4 cells. *BBRC* 244(1):183-6.

DESCRIPTION

Anti-hIL-18-IgG is a monoclonal antibody specific for human interleukin 18 (hIL-18). It has been selected for its ability to efficiently neutralize the biological activity of hIL-18.

Anti-hIL-18-IgG was generated by recombinant DNA technology. It has been produced in CHO cells and purified by affinity chromatography.

APPLICATIONS

Anti-hIL-18-IgG is a neutralizing antibody, it blocks hIL-18-induced cellular activation.

Neutralization

The exact concentration of antibody required to neutralize hIL-18 activity is dependent on the cytokine concentration, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using recombinant hIL-18 and HEK-Blue™ IL-18 cells. These HEK293 cells stably express IL-18RAP, as well as an NF-κB and AP-1-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene.

Procedure for neutralization using HEK-Blue™ IL-18 cells

1. Prepare a cell suspension at ~300,000 cells/ml.
2. Add 20 µl of Anti-hIL-18-IgG or control antibody (1-100 ng/ml final) per well of a 96-well plate.
3. Add 20 µl recombinant human IL-18 (10 pg/ml final concentration).
4. Incubate 30 minutes at 37°C.
5. Add 160 µl of cell suspension (~50,000 cells) per well.
6. Incubate overnight at 37°C.
7. Add 20 µl of supernatant to 180 µl QUANTI-Blue™ in a 96-well plate.
8. Incubate 1-3 hours at 37°C.
9. Assess SEAP levels with the naked eye or spectrophotometrically by reading the optical density (OD) at 655 nm.

Note: We recommend using Anti-β-Gal-hlgG1 (which targets *E. coli* β-galactosidase) as a negative control.

RELATED PRODUCTS

Product	Catalog Code
Anti-β-Gal-hlgG1	bgal-mab1
HEK-Blue™ IL-18 Cells	hkb-hmil18
QUANTI-Blue™	rep-qb1
Recombinant human IL-18	rcyec-hil18

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