

Anti-hIL-28a-IgG

Neutralizing monoclonal mouse antibody against human interleukin 28A

Catalog code: mabg-hil28a-3

<https://www.invivogen.com/anti-hil28a-igg>

For research use only, not for diagnostic or therapeutic use

Version 22J13-MM

PRODUCT INFORMATION

Contents: 3 x 100 µg purified Anti-hIL-28a-IgG antibody, provided azide-free and lyophilized

Target: Natural and recombinant human interleukin-28A (hIL-28A)

Specificity: Reacts with human IL-28A and human IL-28B. No cross-reactivity with mouse IL-28A or mouse IL-28B.

Clone: 21C3

Isotype: Mouse IgG1

Light chain type: Kappa

Immunogen: Human IL-28A 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

Applications: Block/neutralize

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 lyophilized antibody at -20 °C.
- Reconstituted antibody is stable for 1 month at 4 °C and for 1 year at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control

- This product has been validated for neutralization using cellular assays.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

BACKGROUND

Interleukin-28 (IL-28) is a member of the type III interferon (IFN lambda) cytokine family that exhibits several common features with type I IFNs: antiviral activity and antitumor activity^{1,2}. IL-28 exerts its action following binding to a heterodimeric protein complex composed of two subunits, IFN lambda receptor 1 (IFNLR1) and IL-10 receptor beta (IL10Rβ), leading to signaling through the Jak/Stat pathway and inducing the expression of IFN-stimulated genes. IL-28 comes in two isoforms, IL-28A (also known as interferon lambda 2) and IL-28B (also known as interferon lambda 3)¹. The IL-28A isoform has been implicated in the promotion of Th1 cell differentiation and the inhibition of Th2-mediated allergic inflammation³.

1. Donnelly RP. & Kotenko SV., 2010. Interferon-lambda: a new addition to an old family. J Interferon Cytokine Res. 30(8):555-64. 2. Li M. et al., 2009. Interferon-lambda: the modulators of antiviral, antitumor, and immune responses. J. Leukoc. Biol., 86:23-32. 3. Koltzida O. et al., 2011. IL-28A (IFN-λ2) modulates lung DC function to promote Th1 immune skewing and suppress allergic airway disease. EMBO Mol Med. 3(6):348-61.

DESCRIPTION

Anti-hIL-28a-IgG is a monoclonal antibody against human interleukin 28A (hIL-28A). This antibody has been selected for its ability to efficiently neutralize the biological activity of hIL-28A. Anti-hIL-28a-IgG is produced in hybridomas and purified by affinity chromatography.

APPLICATIONS

Anti-hIL-28a-IgG is a neutralizing antibody, it blocks hIL-28-induced cellular activation. Other applications have not been tested.

Neutralization

The exact concentration of antibody required to neutralize human IL-28 activity is dependent on the cytokine concentration, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using recombinant human IL-28A and HEK-Blue™ IFN-α/β cells. These cells are HEK293 cells stably expressing the human STAT2 and IRF9 genes, and an IFN-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene. These cells respond to type I IFNs (IFN-α/β) and to a lesser extent to type III IFNs (IFN-λ).

Procedure for neutralization using HEK-Blue™ IFN-α/β cells

1. Prepare a cell suspension at ~300,000 cells/ml.
2. Add 20 µl of Anti-hIL-28a-IgG or control antibody (1 ng-1 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.
3. Add 20 µl of recombinant human IL-28A (10-30 ng/ml final concentration).
4. Incubate for 30 minutes at 37 °C.
5. Add 160 µl of cell suspension (~50,000 cells) per well.
6. Incubate for 18-24 hours at 37 °C.
7. Add 20 µl of supernatant to 180 µl QUANTI-Blue™ Solution in a 96-well plate.
8. Incubate for 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. QUANTI-Blue™ Solution turns blue following cytokine stimulation but remains pink if neutralization occurs.

RELATED PRODUCTS

Product	Description	Cat. Code
HEK-Blue™ IFN-α/β Cells	IFN-α/β reporter cells	hkb-ifnab
Mouse IgG1 Control	Isotype control antibody	mabg1-ctrlm
QUANTI-Blue™ Solution	SEAP detection reagent	rep-qbs

TECHNICAL SUPPORT

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