

# Anti-hIL-28b-IgG

Neutralizing monoclonal mouse antibody against human interleukin 28B

Catalog code: mabg-hil28b-3

<https://www.invivogen.com/anti-hil28b-igg>

For research use only, not for diagnostic or therapeutic use

Version 22J13-MM

## PRODUCT INFORMATION

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

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

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

**Clone:** 18F4

**Isotype:** Mouse IgG1

**Light chain type:** Kappa

**Immunogen:** Human IL-28B 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<sup>1,2</sup>. 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)<sup>1</sup>. Genetic variation in the IL-28B gene, which codes for the IL-28B isoform, is associated with an altered immune response to certain viruses, including hepatitis C<sup>3,4</sup>.

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. Hajarizadeh B. et al., 2014. Interferon lambda 3 genotype predicts hepatitis C virus RNA levels in early acute infection among people who inject drugs: the InC(3) study. J Clin Virol. 61(3):430-4. 4. Donnelly R.P. et al., 2011. Interferon-lambda and therapy for chronic hepatitis C virus infection. Trends Immunol. 32(9):443-50.

## DESCRIPTION

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

## APPLICATIONS

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

### Neutralization

The exact concentration of antibody required to neutralize human IL-28B 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-28B 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-28b-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-28B (3-10 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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