

Anti-hIL-29-IgG

Neutralizing monoclonal mouse antibody against human interleukin 29

Catalog code: mabg-hil29-3

<https://www.invivogen.com/anti-hil29-igg>

For research use only, not for diagnostic or therapeutic use

Version 22J13-MM

PRODUCT INFORMATION

Contents: 3 x 100 µg purified Anti-hIL-29-IgG antibody, provided azide-free and lyophilized

Target: Natural and recombinant human interleukin-29 (hIL-29)

Specificity: Reacts with human IL-29, human IL-28A, and human IL-28B. No cross-reactivity with mouse IL-28A or mouse IL-29.

Note: An active IL-29 gene is absent in mice.

Clone: 6A11

Isotype: Mouse IgG2a

Light chain type: Kappa

Immunogen: Human IL-29 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-29 (IL-29) is a member of the type III interferon (IFN lambda) cytokine family, which comprises three members: IL-28A, IL-28B, and IL-29. It should be noted that in the mouse genome IL-29 is a pseudogene. Type III IFNs exhibit several common features with type I IFNs: antiviral activity and antitumor activity^{1,2}. In fact, it has been demonstrated that IL-29 works together with type I IFN to promote an antiviral response to hepatitis³. IL-29 is produced by monocytes and dendritic cells in response to viral infection and stimulation with Toll-like receptor (TLR) ligands⁴. IL-29 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.

1. Donnelly RP. & Kolenko 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-λs: the modulators of antiviral, antitumor, and immune responses. *J. Leukoc. Biol.*, 86:23-32. 3. Pagliaccetti NE. et al., 2008. Interleukin-29 functions cooperatively with interferon to induce antiviral gene expression and inhibit hepatitis C virus replication. *J Biol Chem.* 283(44):30079-89. 4. Wolk K. et al., 2008. Maturing dendritic cells are an important source of IL-29 and IL-20 that may cooperatively increase the innate immunity of keratinocytes. *J. Leukoc Biol.* 83(5):1181-93.

TECHNICAL SUPPORT

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DESCRIPTION

Anti-hIL-29-IgG is a monoclonal antibody against human interleukin 29 (hIL-29). This antibody has been selected for its ability to efficiently neutralize the biological activity of hIL-29. Anti-hIL-29-IgG is produced in hybridomas and purified by affinity chromatography.

APPLICATIONS

Anti-hIL-29-IgG is a neutralizing antibody, it blocks hIL-29-induced cellular activation. Other applications have not been tested.

Neutralization

The exact concentration of antibody required to neutralize human IL-29 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-29 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-29-IgG or control antibody (1 ng/ml-1 µg/ml final concentration) per well of a 96-well plate.
3. Add 20 µl of recombinant human IL-29 (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 IgG2a Control	Isotype control antibody	mabg2a-ctrlm
QUANTI-Blue™ Solution	SEAP detection reagent	rep-qbs