Anti-hIFN-α8-IgG

Neutralizing monoclonal antibody against human interferon alpha 8

Catalog # mabg-hifna8

For research use only, not for diagnostic or therapeutic use

Version # 15C03-MM

PRODUCT INFORMATION

Content: 100 µg purified anti-hIFN-α8-IgG antibody, provided azide-free and lyophilized

Target: natural and recombinant human interferon-alpha 8 (IFN-α 8)

Specificity: no cross-reactivity with human IFN-α 1, IFN-α 2, IFN-α 4, IFN-α 5, IFN-α 6, IFN-α 7, IFN-α 10, IFN-α 14, IFN-α 16, IFN-α 17, or IFN-α 21.

Clone: 9A3

Isotype: Mouse IgG1

Immunogen: Human IFN-α 8 protein expressed in Swiss mice following DNA immunization

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

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 at least 1 year.
- Reconstituted antibody is stable for 1 month when stored at 4 °C and for 1 year when aliquoted and 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

Interferon-alpha (IFN-α) is a type I interferon that has both anti-viral and immunomodulatory activities[1]. IFN-α is produced primarily by plasmacytoid dendritic cells[2]. Thirteen different IFN-α subtypes have been described. Although the reason for the multiple IFN-α subtypes is not fully understood, evidence suggests that they have distinct functions[3]. IFN-α binds to a ubiquitously expressed heterodimeric receptor composed of two chains (IFNAR1 and IFNAR2), resulting in the recruitment of JAK1 and TyK2. These kinases phosphorylate STAT1 and STAT2, leading to the formation of the IFN-stimulated gene factor 3 (ISGF3) complex, which binds to IFN-stimulated response elements (ISRE), thereby directly activating the transcription of IFN-stimulated genes (ISGs)[4].

1. Trinchieri G., 2010. Type I interferon: friend or foe? JEM 207(10):2053 -2063. **2. Ivashkiv LB. & Donlin LT., 2014.** Regulation of type I interferon responses. Nat Rev Immunol. 14(1):36-49. **3. Gibbert K.et al., 2013.** IFN-α subtypes: distinct biological activities in anti-viral therapy. Br J Pharmacol. 168(5):1048-58. **4. Theofilopoulos A. et al., 2005.** Type I interferons (alpha/beta) in immunity and autoimmunity. Annu Rev Immunol. 23:307-36.

DESCRIPTION

Anti-hIFNα8-IgG is a monoclonal antibody specific for human interferon α 8 (hIFN-α 8). This antibody has been selected for its ability to efficiently neutralize the biological activity of hIFN-α 8. Anti-hIFNα8-IgG is produced in hybridomas and purified by affinity chromatography.

APPLICATIONS

Anti-hIFNα8-IgG is a neutralizing antibody, it blocks hIFN-α 8-induced cellular activation. Other applications have not been tested.

Neutralization

The exact concentration of antibody required to neutralize human IFN-α activity is dependent on the cytokine concentration, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using recombinant human IFN-α 8 and HEK-Blue™ IFN-α/β cells. These cells are HEK293 cells stably expressing the human STAT2 and IRF9 genes, and an IFN-α/β-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene.

Anti-hIFN-α8-IgG at 5 ng to 1 µg/ml and a negative control antibody (e.g. Mouse IgG1 Control which targets *E. coli* β-galactosidase) were incubated with recombinant human IFN-α 8 at 0.1 IU/ml for 30 min prior to the addition of the HEK-Blue™ IFN-α/β cells. Neutralization of IFN-α-induced signaling by Anti-hIFN-α8-IgG was determined after a 24-hour incubation by assessing SEAP production using QUANTI-Blue™, a SEAP detection reagent. QUANTI-Blue™ 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 optical density at 620-655 nm.

RELATED PRODUCTS

Product	Catalog Code
HEK-Blue™ IFN-α/β Cells	hkb-ifnab
Mouse IgG1 Control	mabg1-ctrlm
QUANTI-Blue™	rep-qb-1

TECHNICAL SUPPORT
InvivoGen USA (Toll-Free): 888-457-5873
InvivoGen USA (International): +1 (858) 457-5873
InvivoGen Europe: +33 (0) 5-62-71-69-39
InvivoGen Hong Kong: +852 3-622-34-80
E-mail: info@invivogen.com