

Anti-hIFN γ -IgA

Neutralizing IgA monoclonal antibody to human interferon gamma

Catalog # maba-hifng-3

For research use only, not for diagnostic or therapeutic use

Version # 15C23-MM

PRODUCT INFORMATION

Content

3 x 100 μ g purified anti-hIFN γ -IgA antibody, provided azide-free and lyophilized

Target: natural and recombinant human interferon gamma (hIFN- γ)

Clone: H7WM120

Isotype: Human IgA2

Formulation: 0.2 μ m filtered solution in Tris HCl buffer with saccharose, glycine and stabilizing agents

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 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 gamma (IFN γ) is a Type II interferon. IFN γ is secreted from CD4⁺ Th1 cells and activated NK cells. It plays a role in activating lymphocytes to enhance anti-microbial and anti-tumor effects^{1, 2}. In addition, IFN γ plays a role in regulating the proliferation, differentiation, and response of lymphocyte subsets. Signaling takes place through a IFN Receptor complex consisting of two alpha chains (Type I receptor) and two beta chains (Type 2 receptor)^{3, 4}. Upon phosphorylation by Jak1, Stat1(alpha) transduces the signal into transcriptional events.

1. **Shtrichman R. & Samuel CE., 2001.** The role of gamma interferon in antimicrobial immunity. *Curr Opin Microbiol.* 4(3):251-9. 2. **Sato A. et al., 2006.** Antitumor activity of IFN-lambda in murine tumor models. *J Immunol.* 176(12):7686-94. 3. **Platanias LC., 2005.** Mechanisms of type-I- and type-II-interferon-mediated signalling. *Nat Rev Immunol.* 5(5):375-86. 4. **Schroder K. et al., 2004.** Interferon-gamma: an overview of signals, mechanisms and functions. *J Leukoc Biol.* 75(2):163-89.

DESCRIPTION

Anti-hIFN γ -IgA is a chimeric monoclonal antibody specific for human interferon γ (hIFN γ). It was generated by combining the constant domains of the human IgA molecule with murine variable regions. Anti-hIFN γ -IgA has been selected for its ability to efficiently neutralize the biological activity of hIFN- γ .

APPLICATIONS

Anti-hIFN γ -IgA is a neutralizing antibody, it blocks hIFN γ -induced cellular activation.

Neutralization

The exact concentration of antibody required to neutralize human IFN γ 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 γ and cells which respond to hIFN γ .

Anti-hIFN γ -IgA (10 ng to 1 μ g/ml) and a negative control antibody (e.g. **Human IgA2 Control** which targets *E. coli* β -galactosidase) were incubated with recombinant human IFN γ at 25 to 500 U/ml for 30 min prior to the addition of the IFN γ -responsive cells. Neutralization of IFN γ -induced signaling by anti-hIFN γ -IgA was determined after a 24 hour incubation by assessing SEAP production using **QUANTI-Blue™**. QUANTI-Blue™ is a SEAP detection medium that 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 OD at 620-655 nm.

RELATED PRODUCTS

Product	Catalog Code
Human IgA2 Control	maba2-ctrl
QUANTI-Blue™	rep-qb-1
Recombinant human IFN γ	rhifn-g

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