

Anti-hTNF α -IgA

Neutralizing IgA monoclonal antibody to human tumor necrosis factor alpha

Catalog # maba-htnfa

For research use only, not for diagnostic or therapeutic use

Version # 08D29-MM

PRODUCT INFORMATION

Content

100 μ g purified anti-hTNF α -IgA antibody, provided azide-free and lyophilized

Clone: H7WM88

Isotype: Human IgA2

Formulation: 0.2 μ m filtered solution in PBS with 5% saccharose

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 6 months.

- Reconstituted antibody is stable 1 month when stored at 4°C and 6 months when aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles.

Description

Anti-hTNF α -IgA is a chimeric monoclonal antibody specific for human tumor necrosis factor alpha (hTNF- α). It was generated by combining the constant domains of the human IgA molecule with murine variable regions. Anti-hTNF α -IgA has been selected for its ability to efficiently neutralize the biological activity of hTNF- α . The neutralizing activity of this IgA antibody was determined using InvivoGen's HEK-Blue™ TNF- α /IL-1 β Cells.

BACKGROUND

Tumor necrosis factor alpha (TNF- α) is a cytokine produced by activated monocytes and macrophages, in response to microbial infection. TNF- α stimulates inflammation and can act directly as an inducer of apoptosis. It mediates many of the systemic acute phase responses but can also cause septic shock in patients with serious infections. TNF- α induces cellular signaling following binding to TNFR1 and TNFR2 receptors. TNF- α signaling involves TRADD, TRAF2 and RIP leading to NF- κ B activation.

APPLICATIONS

Anti-hTNF α -IgA is a neutralizing antibody, it blocks hTNF- α -induced cellular activation. It can also be used for flow cytometry.

Neutralization

The exact concentration of antibody required to neutralize hTNF- 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 TNF- α and HEK-Blue™ TNF- α /IL-1 β Cells. These cells are HEK293 cells stably expressing a SEAP (secreted embryonic alkaline phosphatase) reporter gene under the control of the human IFN- β minimal promoter fused to five NF- κ B and five AP-1 binding sites.

Recombinant hTNF- α at 20-50 ng/ml was incubated with 1 ng-10 μ g/ml anti-hTNF α -IgA and a control antibody for 30 min prior to the addition of the HEK-Blue™ TNF- α /IL-1 β Cells. Neutralization of TNF- α -induced signaling by anti-hTNF α -IgA was determined after 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.

Flow Cytometry

This antibody was used at 500 ng/10⁶ cells with the goat F(ab')₂ anti-human IgA-FITC secondary antibody for indirect immunofluorescence staining of HEK293 cells transiently expressing hTNF- α by flow cytometry.

RELATED PRODUCTS

Product	Catalog Code
HEK-Blue™ TNF α /IL-1 β Cells	hkb-tnfill
Recombinant human TNF- α	htnf-a1a
QUANTI-Blue™	rep-qb1
Control IgA2	maba2-ctrl
Goat F(ab') ₂ Anti-Human IgA - Biotin	chiga-biot
Goat F(ab') ₂ Anti-Human IgA - FITC	chiga-fitc
Goat F(ab') ₂ IgG Isotype Control - FITC	cgig-fitc

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