

Anti-hIL-17a-IgG

Neutralizing monoclonal antibody against human interleukin 17

Catalog # mabg-hil17a-3

For research use only, not for diagnostic or therapeutic use

Version # 15J15-MM

PRODUCT INFORMATION

Content: 3 x 100 µg purified anti-hIL-17a-IgG antibody, provided azide-free and lyophilized

Target: natural and recombinant human interleukin-17a (hIL-17a)

Specificity: Blocks human and mouse IL-17a. No cross-reactivity with human IL-17F and with human or mouse IL-17E.

Clone: 7G11

Isotype: Mouse IgG1

Immunogen: Human IL-17 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

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

Interleukin 17A (IL-17A), a pro-inflammatory cytokine, belongs to a family of six cytokines; IL-17A, IL-17B, IL-17C, IL-17D, IL-17E (also known as IL-25) and IL-17F¹. IL-17A binds a heterodimeric receptor (IL-17RA/IL-17RC), which recruits the adaptor Act1 leading to TRAF6 ubiquitylation, triggering a signaling cascade that results in NF-κB activation, a key regulator of innate immunity². Although this cytokine exerts a protective role against many pathogens, the overproduction of IL-17A is associated with autoimmune diseases, such as rheumatoid arthritis, psoriasis and inflammatory bowel disease; making this cytokine a pertinent target for monoclonal antibodies³.

1. Gu C. et al., 2013. IL-17 family: cytokines, receptors and signaling. *Cytokine*. 64(2):477-85.
2. Qu F. et al., 2012. TRAF6-dependent Act1 phosphorylation by the IκB kinase-related kinases suppresses interleukin-17-induced NF-κB activation. *Mol Cell Biol*. 32(19):3925-37.
3. Onishi RM. & Gaffen SL., 2010. Interleukin-17 and its target genes: mechanisms of interleukin-17 function in disease. *Immunology*. 129(3):311-21.

DESCRIPTION

Anti-hIL-17a-IgG is a monoclonal antibody specific for hIL-17a. This antibody has been selected for its ability to efficiently neutralize the biological activity of hIL-17a. Anti-hIL-17a-IgG is produced in hybridomas and purified by affinity chromatography.

APPLICATIONS

Anti-hIL-17a-IgG is a neutralizing antibody, it blocks hIL-17a-induced cellular activation. Other applications have not been tested.

Neutralization

The exact concentration of antibody required to neutralize hIL-17a activity is dependent on the cytokine concentration, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using recombinant hIL-17a and HEK-Blue™ IL-17 cells. These cells are HEK293 cells stably expressing the human IL-17RA/IL-17RC receptor, the Act1 adaptor molecule, and a NF-κB-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene.

Anti-hIL-17a-IgG (50 ng-1 µg/ml) and a negative control antibody (e.g. Mouse IgG1 Control which targets *E. coli* β-galactosidase) were incubated with recombinant hIL-17a at 30 ng/ml for 30 min prior to the addition of the HEK-Blue™ IL-17 cells. Neutralization of IL-17a-induced signaling by anti-hIL-17a-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 IL-17 Cells	hkb-il17
Mouse IgG1 Control	mabg1-ctrlm
QUANTI-Blue™	rep-qb1

TECHNICAL SUPPORT

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