

# Anti-mIL-6-mIgG1e3

Neutralizing monoclonal mouse antibody against murine interleukin 6

Catalog code: mil6-mab15-02

<https://www.invivogen.com/anti-mil6-igg1e3>

For research use only

Version 22J11-AK

## PRODUCT INFORMATION

**Contents:** 200 µg purified anti-mIL-6-mIgG1e3 monoclonal antibody (mAb) is provided azide-free and lyophilized.

**Target:** Murine IL-6 (mIL-6)

**Specificity:** No cross-reactivity with human IL-6

**Clone:** 10F9

**Sequence:** ~65% murine (constant region) and ~35% rat (variable region)

**Source:** Chinese hamster ovary (CHO) cells

**Isotype:** Murine IgG1e3 (D265A mutation; no effector function)

**Light chain type:** Kappa

**Purification:** Affinity chromatography with protein A

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

**Tested applications:** Neutralization and blocking *in vitro*

### Antibody resuspension (0.1 mg/ml)

*Note:* Ensure you see the lyophilized pellet before resuspension.

Resuspend Anti-mIL-6-mIgG1e3 with sterile water:

Add 2 ml of sterile water per 200 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 complete sequence of the antibody construct has been verified.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

## BACKGROUND

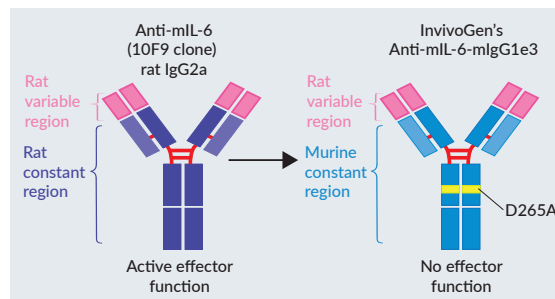
Interleukin 6 (IL-6) is a multifunctional cytokine that plays an important role in the regulation of the immune response, hematopoiesis, and inflammation<sup>1,2</sup>. It is secreted by many cell types, including endothelial cells, fibroblasts, osteoblasts and T cells. IL-6 exerts its action by binding to the IL-6 receptor (IL-6R). The complex of IL-6 and IL-6R associates with the signal-transducing membrane protein gp130. This leads to the activation of a signaling cascade through the tyrosine kinases of the Janus family (JAK1, JAK2, and Tyk2) and the signal transducer and transcription activator 3 (STAT3) which binds elements of IL-6-inducible genes<sup>3</sup>.

## DESCRIPTION

Anti-mIL-6-mIgG1e3 is a recombinant mAb specific against mIL-6. The rat derived constant region was replaced by an engineered murine constant region, making the mAb ~65% of murine origin. Within the IgG1e3 isotype, a point mutation D265A was introduced leading to a complete loss of unwanted cytolytic effector functions. Anti-mIL-6-mIgG1e3 now consists of the variable region of rat anti-mIL-6 mAb (clone 10F9) and the engineered murine IgG1e3 constant region. This antibody has been selected for its ability to efficiently neutralize the biological activity of mIL-6. It is generated by recombinant DNA technology, produced in CHO cells and purified by affinity chromatography.

## APPLICATIONS

Anti-mIL-6-mIgG1e3 is a neutralizing antibody, which blocks mIL-6-induced cellular activation. InvivoGen also offers this mAb in the *InvivoFit*™ grade, specifically adapted for *in vivo* experiments.



InvivoGen's engineered murinized Anti-mIL-6-mIgG1e3 antibody

1. Kang S. et al., 2015. Therapeutic uses of antiinterleukin-6 receptor antibody. *Int. Immunol.* 27:21-9. 2. Akira S. et al., 1990. Biology of multifunctional cytokines: IL 6 and related molecules (IL 1 and TNF). *FASEB J.* 4(11):2860-7. 3. Murray P., 2007. The JAK-STAT Signaling Pathway: Input and Output Integration. *J. Immunol.* 178:2623-9.

## RELATED PRODUCTS

Product	Cat.Code
Anti-mIL-6-mIgG1e3 <i>InvivoFit</i> ™	mil6-mab15-1
Anti-β-Gal-mIgG1e3	bgal-mab15-02
Anti-β-Gal-mIgG1e3 <i>InvivoFit</i> ™	bgal-mab15-1

### TECHNICAL SUPPORT

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