

Anti-mIL-6-mIgG1e3 InvivoFit™

Neutralizing monoclonal mouse antibody against murine interleukin 6

Catalog code: mil6-mab15-1/mil6-mab15-10

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

For research use only

Version 22J11-AK

PRODUCT INFORMATION

Contents:

Anti-mIL-6-mIgG1e3 InvivoFit™, purified monoclonal antibody (mAb), provided azide-free and lyophilized. It is available in two pack sizes:

- 1 mg: mil6-mab15-1
- 10 mg: mil6-mab15-10

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 5% saccharose and 0.25% Polysorbate 80*

Tested applications: Neutralization and blocking *in vitro*

Antibody resuspension (2 mg/ml)

Note: Ensure you see the lyophilized pellet before resuspension.

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

Add 500 µl to 1 mg or 5 ml to 10 mg.

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.

- <5% aggregates (confirmed by size exclusion chromatography).

- Anti-mIL-6-mIgG1e3 InvivoFit™ is filter-sterilized (0.2 µm) and its endotoxin level is <1 EU/mg (determined by the LAL assay).

BACKGROUND

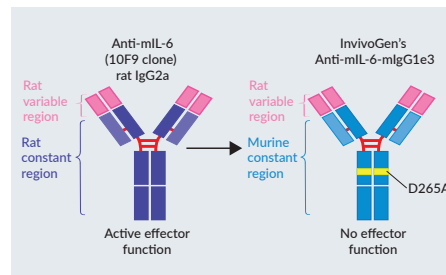
Interleukin 6 (IL-6) is a multifunctional cytokine that plays an important role in the regulation of the immune response, hematopoiesis, and inflammation^{1,2}. It is secreted by many cell types, including endothelial cells, fibroblasts, osteoblasts and T cells. IL-6 exerts its action by binding to the 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 genes³.

DESCRIPTION

Anti-mIL-6-mIgG1e3 InvivoFit™ 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 InvivoFit™ 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 InvivoFit™ is a neutralizing antibody, which blocks mIL-6-induced cellular activation. InvivoFit™ is a high-quality standard specifically adapted for *in vivo* studies. This product is filter-sterilized (0.2 µm) and filled under strict aseptic conditions in a clean room. This mAb is also available as a standard grade for *in vitro* experiments.



InvivoGen's engineered murinized Anti-mIL-6-mIgG1e3 InvivoFit™ 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	mil6-mab15-02
Anti-β-Gal-mIgG1e3	bgal-mab15-02
Anti-β-Gal-mIgG1e3 InvivoFit™*	bgal-mab15-1

* *Optional:* The control mAb Anti-β-Gal-mIgG1e3 InvivoFit™ is provided without the addition of Polysorbate 80 (Tween® 80). If needed, add 0.25% Polysorbate 80 after resuspension.

TECHNICAL SUPPORT

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