

# Anti-mCD25-PC-mIgG2a InvivoFit™

PC-61.5.3-derived recombinant monoclonal antibody against murine CD25

Catalog code: mcd25c1-mab10-1, mcd25c1-mab10-10

<https://www.invivogen.com/anti-mcd25-migg2a-invivoFit>

For research use only, not for diagnostic or therapeutic use

Version 22G12-AK

## PRODUCT INFORMATION

### Contents:

Anti-mCD25-PC-mIgG2a InvivoFit™, purified monoclonal antibody (mAb), provided azide-free and lyophilized. It is available in two pack sizes: • 1 mg • 10 mg

**Target:** Murine CD25 (aka IL-2R alpha)

**Clone:** PC-61.5.3-derived

**Sequence:** ~65 % of mouse origin (constant region)

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

**Isotype:** Murine IgG2a (mIgG2a)

**Light chain type:** Kappa

**Purification:** Affinity chromatography with protein A

**Formulation:** 0.2 µm filtered solution in 150 mM sodium chloride, 20 mM sodium phosphate buffer with 5% saccharose

**Administration:** Suitable for parenteral delivery in mice

**Applications:** ELISA; Flow cytometry; *in vivo* depletion

### Antibody resuspension (2 mg/ml)

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

Resuspend Anti-mCD25-PC-mIgG2a 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. Store lyophilized antibody at -20 °C. Lyophilized product is stable for at least 1 year.
- Reconstituted antibody is stable for 1 month at 4 °C and for 1 year at -20 °C. Avoid repeated freeze-thaw cycles.

### Quality control

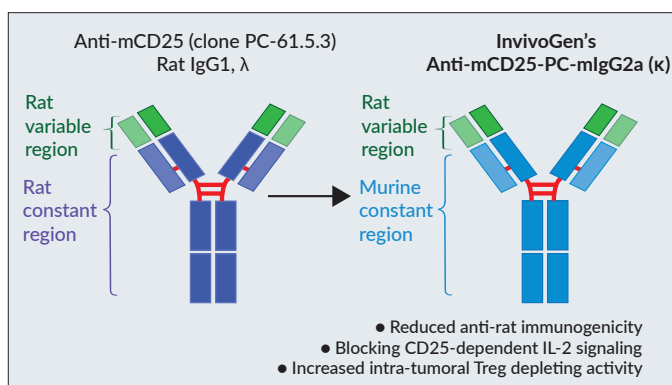
- Antibody binding has been validated by ELISA using a coated mouse CD25 protein.
- The complete sequence of the antibody construct has been verified.
- <5% aggregates (confirmed by size exclusion chromatography).
- Anti-mCD25-PC-mIgG2a InvivoFit™ is filter-sterilized (0.2 µm) and its endotoxin level is <1 EU/mg (determined by the LAL assay).

## BACKGROUND

The cluster of differentiation 25 (CD25, aka IL-2RA) in association with CD122 and CD132, forms the high-affinity cell-surface receptor for the IL-2 cytokine (IL-2R). CD25 is constitutively expressed at high levels by regulatory T (Treg) cells and only transiently at low levels by effector T (Teff) cells upon activation<sup>1</sup>. While Teff cell function is augmented by IL-2 signaling, Treg cells absolutely require this signal for survival. Treg cells have been within the scope of clinical use to treat immunological diseases, including auto-immune disorders and cancer<sup>2</sup>.

## DESCRIPTION

Anti-mCD25-PC-mIgG2a InvivoFit™ is an anti-mCD25 mAb featuring the variable region of the previously described rat IgG1 clone PC-61.5.3<sup>3</sup>, a murinized IgG2a constant region, and Kappa light chains. The original PC-61.5.3 mAb mediates *in vivo* depletion of Treg cells through a single activatory FcγR, FcγRIII, on phagocytes<sup>3</sup>. However, this function is hampered in a murine tumor microenvironment due to the local upregulation of the inhibitory FcγRIIb, displaying a similar affinity for rat IgG1<sup>4</sup>. PC-61.5.3, when turned into mIgG2a mAb, mediates superior intra-tumoral Treg depletion as it binds multiple activatory FcγR (i.e. FcγRI, FcγRIII, and FcγRIV)<sup>4</sup>. Importantly, this antibody also blocks IL-2 signaling in effector T cells, which limits its anti-tumor activity<sup>5</sup>. Anti-mCD25-PC-mIgG2a InvivoFit™ is produced in Chinese hamster ovary (CHO) cells, purified by affinity chromatography with protein A.



1. Damoiseaux J., 2020. The IL-2 – IL-2 receptor pathway in health and disease: The role of the soluble IL-2 receptor. *Clinical Immunol.* 218:108515. 2. Bayati F. *et al.*, 2021. The Therapeutic Potential of Regulatory T Cells: Challenges and Opportunities. *Frontiers in Immunol.* 11:3455. 3. Setiady Y. *et al.*, 2009. *In vivo* depletion of CD4+FOXP3+ Treg cells by the PC61 anti-CD25 monoclonal antibody is mediated by FcγRIII+ phagocytes. *Eur J Immunol.* 40(3):780. 4. Arce Vargas F. *et al.*, 2017. Fc-optimized anti-CD25 depletes tumor-infiltrating regulatory T cells and synergizes with PD-1 blockade to eradicate established tumors. *Immunity.* 46(4):577. 5. Solomon I. *et al.*, 2020. CD25-Treg-depleting antibodies preserving IL-2 signaling on effector T cells enhance effector activation and antitumor immunity. *Nat. Cancer* 1(12):1153.

## RELATED PRODUCTS

Product	Catalog Code
Mouse IgG2a control	bgal-mab10-1
Anti-mCD25-7D4-mIgG2a InvivoFit™	mcd25c2-mab10-1
Anti-mCD4-mIgG2a InvivoFit™	mcd4-mab10-1
Anti-mCD8-mIgG2a InvivoFit™	mcd8-mab10-1
Anti-mPD1-mIgG1e3 InvivoFit™	mpd1-mab15-1

For more information visit <https://www.invivogen.com/mouse-anti-mouse-mabs>.

## TECHNICAL SUPPORT

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