

Technical Data Sheet

RecombiMAb anti-mouse CD25



Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxcell.com/terms-and-conditions>.

Lot Specific Information

Lot Number: Lot Specific*
Volume: Lot Specific*
Concentration: Lot Specific* (generally 4 to 11 mg/ml) *
Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number: CP085
Clone: PC-61-CP085
Isotype: Mouse IgG2a
Recommended Isotype Control(s): RecombiMAb mouse IgG2a isotype control, anti-hen egg lysozyme
Recommended Dilution Buffer: InVivoPure pH 7.0 Dilution Buffer
Immunogen: IL-2-dependent cytolytic mouse T cell clone B6.1
Reported Applications: Western Blot*
Flow Cytometry*
CD25-dependent IL-2 signaling blockade*
In-vivo regulatory T cell depletion*
Intratumoral Treg depletion*
*Reported for the original rat IgG1, λ antibody

Formulation: PBS, pH 7.0
Contains no stabilizers or preservatives

Endotoxin: ≤ 0.5 EU/mg (≤ 0.0005 EU/ μ g)
Determined by LAL assay

Purity: $\geq 95\%$
Determined by SDS-PAGE

Sterility: 0.2 μ m filtration

Production: Purified from mammalian cell supernatant in an animal-free facility

Purification: Protein G

Aggregation: $< 5\%$
Determined by SEC

RRID:
Molecular Weight: 150 kDa

Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

Description

PC-61-CP085 is a recombinant, Fc-engineered chimeric version of the original PC-61 (PC-61.5.3) antibody. The variable domain sequences are identical but the constant region sequences have been switched from rat IgG1, λ to mouse IgG2a, λ for optimal use in murine models. This Fc-engineered antibody is reported to deplete Treg cells within the blood, lymph nodes and tumor microenvironment, whereas the original hybridoma-derived rat antibody failed to show reduction of

intratumoral Treg cells. The enhanced Treg depletion within the tumor microenvironment by the Fc-engineered antibody is attributed to increased engagement with activating murine Fc gamma receptors, overcoming resistance caused by intratumoral upregulation of the inhibitory receptor FcγRIIb. Additionally, species-matched chimeric antibodies exhibit regulated effector functions—including Fc receptor binding and complement activation—and result in less immunogenicity and formation of anti-drug antibodies (ADAs) than xenogenic antibodies in animal models. The highly controlled sequence and lack of genetic drift in recombinant antibodies provide more reliable and reproducible results over hybridoma derived antibodies. The PC-61.5.3-CP085 monoclonal antibody reacts with mouse IL-2Rα also known as CD25, Ly-43, p55, or Tac. IL-2Rα is the 55 kDa ligand-binding subunit of the interleukin 2 receptor alpha chain. IL-2Rα expression is largely restricted to tumor-infiltrating Treg cells in mice. Alone, the IL-2Rα binds IL-2 with relatively low affinity however, when IL-2Rα associates with IL-2Rβ (CD122) and the common gamma chain (CD132) the complex binds IL-2 with high affinity. The PC-61.5.3 antibody has been shown to inhibit the binding of IL-2 to both the low and high affinity IL-2 receptor forms and block CD25-dependent IL-2 signaling. References: Arce Vargas, Frederick et al. "Fc-Optimized Anti-CD25 Depletes Tumor-Infiltrating Regulatory T Cells and Synergizes with PD-1 Blockade to Eradicate Established Tumors." *Immunity* vol. 46,4 (2017): 577-586. doi:10.1016/j.immuni.2017.03.013 Huss, David J et al. "Anti-CD25 monoclonal antibody Fc variants differentially impact regulatory T cells and immune homeostasis." *Immunology* vol. 148,3 (2016): 276-86. doi:10.1111/imm.12609 Solomon, Isabelle et al. "CD25-Treg-depleting antibodies preserving IL-2 signaling on effector T cells enhance effector activation and antitumor immunity." *Nature cancer* vol. 1,12 (2020): 1153-1166. doi:10.1038/s43018-020-00133-0

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/cp085?bxcs=9k1b3a#tab_references or scan the QR code below.



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