

## Anti-CD25 [2E4] VivopureX 10 mg Ab02358-2.0-VXL

This reformatted mouse antibody was made using the variable domain sequences of the original Mouse IgG1 format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Mouse IgG2a, Kappa

**Clone Number:** 2E4

**Alternative Name(s) of Target:** IL-2-RA; Interleukin-2 receptor subunit alpha; IL-2 receptor subunit alpha; IL-2R subunit alpha; IL2-RA; p55

**UniProt Accession Number of Target Protein:** P01590

**Published Application(s):** Depletion, FC

**Published Species Reactivity:** Mouse

**Immunogen:** The original version of this antibody was raised to recognize mouse CD25.

**Specificity:** 2E4 recognizes mouse CD25. This epitope is distinct from the IL-2 binding site and does not block binding of IL-2 to CD25. This antibody binds the same or overlapping epitope as 7D4 (Ab02216) but different than Ab01107. Murine CD25 is a 55 kDa interleukin-2 receptor alpha chain (IL-2R alpha). CD25 is expressed by early progenitors of the T and B lineage as well as by activated mature T and B lymphocytes. By itself, CD25 binds IL-2 only with low affinity. However, CD25 associates with CD122 (IL-2 receptor beta chain) and CD132 (common gamma chain) to form the high affinity IL-2 receptor.

**Application Notes:** 2E4 is a non-IL-2 blocking anti-CD25 antibody. The variable fragment (Fv) of this antibody conjugated to a 38-kDa portion of Pseudomonas exotoxin A exhibited exceptional ability to induce tumor rejection and lasting antitumor immunity in mice making it a promising candidate in the immunotherapy research and development (Onda et al., 2019; pmid: 30760587). This 2E4 Fv-based CD25-specific recombinant immunotoxin (RIT) was injected into three different mouse tumor models and brought about complete regressions of the majority of them leading, in many cases, to immunity against tumors' reinjections and cross-tumor type immunity (Onda et al., 2019; pmid: 30760587). Finally, it was demonstrated that this immunotoxin (RIT) caused significant depletion of regulatory T cells (Tregs) in the tumor environment but, importantly, not in the spleen; at the same time, the number of effector, cytotoxic CD8 cells in the tumor increased what would suggest the possible antitumour mechanism of this immunotoxin (Onda et al., 2019; pmid: 30760587). Additionally, 2E4 can be used in flow cytometric analyses; for instance, it has been used to perform phenotyping of lymphocytes as a part of a wider panel of antibodies (Alexander et al., 2008; pmid: 18824594).

**Antibody First Published in:** Ortega et al. The murine IL 2 receptor. I. Monoclonal antibodies that define

distinct functional epitopes on activated T cells and react with activated B cells J Immunol. 1984 Oct;133(4):1970-5. [PMID:6206144](#)

**Note on publication:** Describes the characterization of the antibody 2E4.

## Product Form

**Size:** 10 mg VivopureX products are produced at high purity (>98%), low endotoxin (<0.5 EU/mg) and are formulated without preservatives. These antibodies are chimerized to have an Fc domain matching their target species to reduce immunogenicity and give you the optimal effector function for your experiment. As a result VivopureX products are the ideal choice for in vivo research applications.

**Purification:** Protein A affinity purified

**Supplied In:** PBS only.

**Storage Recommendation:** All VivopureX products are formulated in PBS only without addition of preservatives. To ensure optimal storage and prevent microbial contamination, only open and dispense under sterile conditions.

**Concentration:**  $\geq 1$ mg (see vial label for exact conc)

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.