

# PRODUCT INFORMATION



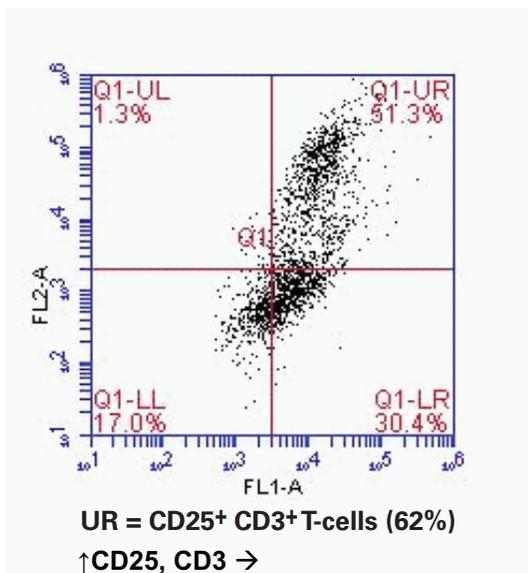
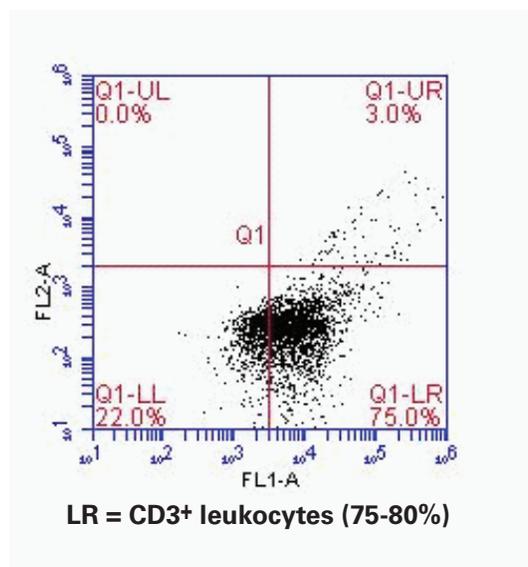
## CD25/Interleukin-2R $\alpha$ Monoclonal Antibody (PE) (Clone 143-13)

Item No. 10339

### Overview and Properties

<b>Contents:</b>	This vial contains 100 $\mu$ g of affinity-purified, PE labeled monoclonal antibody.
<b>Synonyms:</b>	Cluster of Differentiation 25, IL-2R $\alpha$ , ILR2A, Interleukin-2 Receptor Subunit $\alpha$ , p55, Tac
<b>Species Reactivity:</b>	(+) Human CD25
<b>Uniprot No.:</b>	P01589
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	$\geq$ 1 year
<b>Storage Buffer:</b>	TBS, pH 7.4, with 50% glycerol, 5 mg/ml BSA, and 0.02% sodium azide
<b>Clone:</b>	143-13
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG1
<b>Applications:</b>	Flow cytometry (5-10 $\mu$ l per test), frozen tissue sections, and immunofluorescence; assay dependent dilution. Does not work for Western blotting.

### Images



**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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CD25, also known as interleukin-2 receptor  $\alpha$  (IL-2R $\alpha$ ), is a transmembrane glycoprotein.<sup>1</sup> It is composed of two domains, D1 and D2, and associates with the CD122/IL-2 $\beta$  and CD132/IL-2 $\gamma$ c subunits to form the heterotrimeric IL-2 receptor. CD25 is expressed in activated T and B cells, regulatory T cells, and lymphokine-activated killer (LAK) cells.<sup>2-4</sup> Activation of IL-2R on T cells increases the expression of CD25 and leads to T cell proliferation and differentiation, as well as activation-induced T cell death.<sup>3,4</sup> *ILR2A* expression and CD25 protein levels in bone marrow are increased in patients with acute myeloid leukemia (AML) and associated with poor prognosis.<sup>3</sup> SNPs in *ILR2A* and elevated serum levels of a soluble form of CD25 are associated with an increased risk of Graves' disease.<sup>5</sup> Cayman's CD25/Interleukin-2R $\alpha$  Monoclonal Antibody (PE) (Clone 143-13) is composed of a CD25 monoclonal antibody conjugated to phycoerythrin (PE) and can be used for flow cytometry (FC), immunocytochemistry (ICC), and immunohistochemistry (IHC) applications.

## References

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1. Stauber, D.J., Debler, E.W., Horton, P.A., *et al.* Crystal structure of the IL-2 signaling complex: Paradigm for a heterotrimeric cytokine receptor. *Proc. Natl. Acad. Sci. USA* **103**(8), 2788-2793 (2006).
2. Volkó, J., Kenesei, Á., Zhang, M., *et al.* IL-2 receptors preassemble and signal in the ER/Golgi causing resistance to antiproliferative anti-IL-2R $\alpha$  therapies. *Proc. Natl. Acad. Sci. USA* **116**(42), 21120-21130 (2019).
3. Li, J., Ran, Q., Xu, B., *et al.* Role of CD25 expression on prognosis of acute myeloid leukemia: A literature review and meta-analysis. *PLoS One* **15**(7), e0236124 (2020).
4. Waldmann, T.A. The IL-2/IL-2 receptor system: A target for rational immune intervention. *Immunol. Today* **14**(6), 264-269 (1993).
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