

IL-2R α (BC96): sc-19628

BACKGROUND

The IL-2 receptor is a multicomponent complex consisting of three subunits, α , β and γ , each of which is required for high-affinity binding of IL-2. The α chain functions primarily in binding IL-2, whereas the β and γ chains contribute to IL-2 binding and are essential to IL-2-induced activation of signaling pathways leading to T cell growth. Both IL-4R and IL-7R were initially described as single chain, high-affinity, ligand-binding cytokine receptors. However, it is now well-established that the IL-2R γ chain functions as a second subunit of the high-affinity IL-4R and IL-7R receptors. Consequently, the originally described subunits of these latter receptors are now referred to as IL-4R α and IL-7R α , respectively, while the common subunit is referred to as γ c. Although the common γ chain enhances ligand binding in these three cytokine receptors, it has no capacity to bind these ligands on its own. There is evidence that the γ c chain is also a subunit of IL-13R.

REFERENCES

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2. Mosley, B., et al. 1989. The murine interleukin-4 receptor: molecular cloning and characterization of secreted and membrane-bound forms. *Cell* 59: 335-348.
3. Goodwin, R.G., et al. 1990. Cloning of the human and murine interleukin-7 receptors: demonstration of a soluble form and homology to a new receptor superfamily. *Cell* 60: 941-951.
4. Takeshita, T., et al. 1992. Cloning of the γ chain of the human IL-2 receptor. *Science* 257: 379-382.
5. Cao, X., et al. 1993. Characterization of cDNAs encoding the murine interleukin-2 receptor (IL-2R) γ chain: chromosomal mapping and tissue specificity of IL-2R γ chain expression. *Proc. Natl. Acad. Sci. USA* 90: 8464-8468.
6. Kondo, M., et al. 1993. Sharing of the interleukin-2 (IL-2) receptor γ chain between receptors for IL-2 and IL-4. *Science* 262: 1874-1877.
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8. Minami, Y., et al. 1993. The IL-2 receptor complex: its structure, function and target genes. *Annu. Rev. Immunol.* 11: 245-268.
9. He, Y.W., et al. 1995. Expression and function of the γ c subunit of the IL-2, IL-4 and IL-7 receptors. *J. Immunol.* 154: 1596-1605.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: IL2RA (human) mapping to 10p15.1.

SOURCE

IL-2R α (BC96) is a mouse monoclonal antibody raised against IL-2R α of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-2R α (BC96) is available conjugated to either phycoerythrin (sc-19628 PE), fluorescein (sc-19628 FITC) or Alexa Fluor[®] 488 (sc-19628 AF488) or Alexa Fluor[®] 647 (sc-19628 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

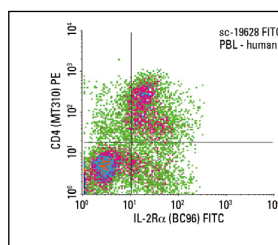
APPLICATIONS

IL-2R α (BC96) is recommended for detection of IL-2R α of human origin by flow cytometry (1 μ g per 1 x 10⁶ cells).

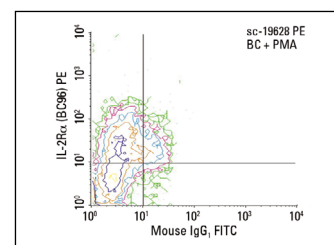
Suitable for use as control antibody for IL-2R α siRNA (h): sc-29367, IL-2R α shRNA Plasmid (h): sc-29367-SH and IL-2R α shRNA (h) Lentiviral Particles: sc-29367-V.

Molecular Weight of IL-2R α : 55 kDa.

DATA



IL-2R α (BC96) FITC: sc-19628 FITC. FCM analysis of PMA-stimulated human peripheral blood leukocytes stained with IL-2R α (BC96) FITC and CD4 (MT310) PE: sc-19641 PE. Quadrant markers were set based on the isotype controls, normal mouse IgG₁-FITC: sc-2855 and normal mouse IgG₁-PE: sc-2866.



IL-2R α (BC96) PE: sc-19628 PE. FCM analysis of PMA-stimulated human peripheral blood leukocytes stained with IL-2R α (BC96) PE and CD4 (MT310) FITC: sc-19641 FITC. Quadrant markers were set based on the isotype controls, normal mouse IgG₁-PE: sc-2866 and normal mouse IgG₁-FITC: sc-2855.

SELECT PRODUCT CITATIONS

1. Wang, Y., et al. 2018. Detection of Treg/Th17 cells and related cytokines in peripheral blood of chronic hepatitis B patients combined with thrombocytopenia and the clinical significance. *Exp. Ther. Med.* 16: 1328-1332.

RESEARCH USE

For research use only, not for use in diagnostic procedures.