SANTA CRUZ BIOTECHNOLOGY, INC.

# IL-3Rα (V-18): sc-681

## BACKGROUND

The human IL-3, IL-5 and GM-CSF receptors are composed of unique α subunits and a common β subunit. The α subunits are low-affinity ligand-binding proteins while the β subunits do not themselves bind ligand, but are required for high-affinity binding by the α subunits. The mouse IL-3 receptor has two distinct β subunits, one that functions only in IL-3-mediated cell signaling and a second that is shared with IL-5 and GM-CSF. The murine β subunits are 91% homologous at the amino acid level but only 56% homologous to the human β subunit. Although neither the murine nor the human β subunit contains tyrosine kinase domains, both activate tyrosine phosphorylation-mediated signaling pathways.

## CHROMOSOMAL LOCATION

Genetic locus: IL3RA (human) mapping to Xp22.33, Yp11.32; Il3ra (mouse) mapping to 14 A1.

## SOURCE

IL-3Rα (V-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IL-3Rα of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-681 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

IL-3Rα (V-18) is recommended for detection of IL-3Rα of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-3Rα siRNA (h): sc-29368, IL-3Rα siRNA (m): sc-35660, IL-3Rα shRNA Plasmid (h): sc-29368-SH, IL-3Rα shRNA Plasmid (m): sc-35660-SH, IL-3Rα shRNA (h) Lentiviral Particles: sc-29368-V and IL-3Rα shRNA (m) Lentiviral Particles: sc-35660-V.

Molecular Weight of IL-3Rα: 70 kDa.

Positive Controls: human esophagus tissue or MCP-5 whole cell lysate.

## STORAGE

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

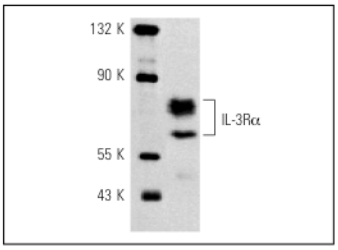
## RESEARCH USE

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

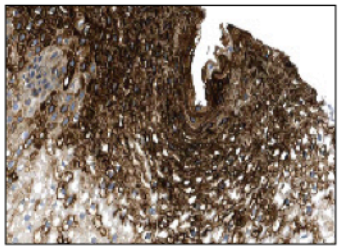
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




IL-3Rα (V-18): sc-681. Western blot analysis of IL-3Rα expression in MCP-5 whole cell lysate.



IL-3Rα (V-18): sc-681. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing membrane and cytoplasmic staining of squamous epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS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2. Wong, S., et al. 2003. IL-3 receptor signaling is dispensable for Bcr-Abl-induced myeloproliferative disease. Proc. Natl. Acad. Sci. USA 100: 11630-11635.
3. Huang, H.M., et al. 2005. Simultaneous activation of JAK1 and JAK2 confers IL-3 independent growth on Ba/F3 pro-B cells. J. Cell Biochem. 96: 361-375.
4. Inderbitzin, D., et al. 2005. Interleukin-3 induces hepatocyte-specific metabolic activity in bone marrow-derived liver stem cells. J. Gastrointest. Surg. 9: 69-74.
5. Bu, D.X., et al. 2006. Induction of neutrophil gelatinase-associated lipocalin in vascular injury via activation of nuclear factor-κB. Am. J. Pathol. 169: 2245-2253.
6. Jablonska, B., et al. 2006. The growth capacity of bone marrow CD34 positive cells in culture is drastically reduced in a murine model of Down syndrome. C. R. Biol. 329: 726-732.
7. Gorantla, S.P., et al. 2010. Oncogenic JAK2V617F requires an intact SH2-like domain for constitutive activation and induction of a myeloproliferative disease in mice. Blood 116: 4600-4611.