

IL-3R α (6H6): sc-80650

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.

REFERENCES

- Hayashida, K., et al. 1990. Molecular cloning of a second subunit of the receptor for human granulocyte macrophage colony-stimulating factor (GM-CSF): reconstitution of a high affinity GM-CSF receptor. Proc. Natl. Acad. Sci. USA 87: 9655-9659.
- Tavernier, J., et al. 1992. A human high affinity interleukin-5 receptor (IL-5R) is composed of an IL-5 specific chain and a β chain shared with the receptor for GM-CSF. Cell 66: 1175-1184.
- Hara, T., et al. 1992. Two distinct functional receptors for mouse interleukin-3. EMBO J. 11: 1875-1884.
- Sakamaki, K., et al. 1992. Critical cytoplasmic domains of the common β subunit of the human GM-CSF, IL-3, and IL-5 receptors for growth signal transduction and tyrosine phosphorylation. EMBO J. 11: 3541-3549.

CHROMOSOMAL LOCATION

Genetic locus: IL3RA (human) mapping to Xp22.3/Yp11.32.

SOURCE

IL-3R α (6H6) is a mouse monoclonal antibody raised against COS cells transfected with the IL-3R α chain of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-3R α (6H6) is recommended for detection of IL-3R α of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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

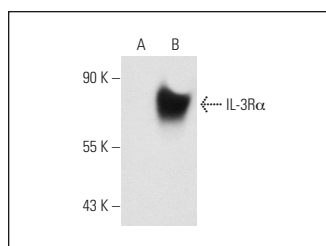
Molecular Weight of IL-3R α : 70 kDa.

Positive Controls: IL-3R α (h): 293T Lysate: sc-114555.

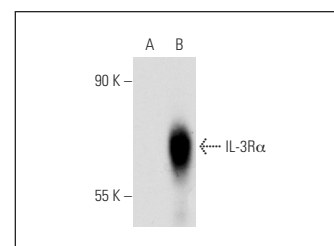
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IL-3R α (6H6): sc-80650. Western blot analysis of IL-3R α expression in non-transfected: sc-117752 (A) and human IL-3R α transfected: sc-176365 (B) 293T whole cell lysates.



IL-3R α (6H6): sc-80650. Western blot analysis of IL-3R α expression in non-transfected: sc-117752 (A) and human IL-3R α transfected: sc-114555 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Dirksen, U., et al. 1997. Human pulmonary alveolar proteinosis associated with a defect in GM-CSF/IL-3/IL-5 receptor common β chain expression. J. Clin. Invest. 100: 2211-2217.
- Dirksen, U, et al. 1998. Defective expression of granulocyte-macrophage colony-stimulating factor/interleukin-3/interleukin-5 receptor common β chain in children with acute myeloid leukemia associated with respiratory failure. Blood 92: 1097-1103.
- Aldinucci, D., et al. 2002. Expression of functional Interleukin-3 receptors on Hodgkin and Reed-Sternberg cells. Am. J. Pathology 160: 585-596.
- Basso, K., et al. 2004. Gene expression profiling of hairy cell leukemia reveals a phenotype related to memory B cells with altered expression of chemokine and adhesion receptors. J. Exp. Med. 199: 59-68.

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.



See **IL-3R α (S-12): sc-455** for IL-3R α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.