

IL-13R α 2 (YY-23Z): sc-74160

BACKGROUND

The Th2 cytokine interleukin-13 (IL-13) plays a critical role in allergen-induced airway hyperresponsiveness (AHR). Two different receptors exist for IL-13, designated IL-13R α 1 and 2. IL-13R α 1 exists as a heterodimer of IL-13R α 1 and IL-4R α as a signaling subunit, whereas IL-13R α 2 acts as a decoy receptor for IL-13. Furthermore, TNF α or IL-4 stimulation induces IL-13R α 2 upregulation, while IL-13R α 1 is constitutively expressed. Cell surface localization of IL-13R α 2 abrogates IL-13 signaling, thus IL-13 induced translocation of the receptor from the cytoplasm provides a mechanism for negative-feedback of IL-13 signaling. IL-13R α 1 expression is predominant in B cells, monocytes and T cells, whereas IL-13R α 2 expression is highest in glioma cells.

REFERENCES

- Guo, J., et al. 1997. Chromosome mapping and expression of the human interleukin-13 receptor. *Genomics* 42: 141-145.
- Graber, P., et al. 1998. The distribution of IL-13 receptor α 1 expression on B cells, T cells and monocytes and its regulation by IL-13 and IL-4. *Eur. J. Immunol.* 28: 4286-4298.
- Wu, A.H. and Low, W.C. 2002. Molecular cloning of the rat IL-13 α 2 receptor cDNA and its expression in rat tissues. *J. Neurooncol.* 59: 99-105.
- Park, J.W., et al. 2003. Respiratory syncytial virus-induced airway hyperresponsiveness is independent of IL-13 compared with that induced by allergen. *J. Allergy Clin. Immunol.* 112: 1078-1087.
- Yasunaga, S., et al. 2003. The negative-feedback regulation of the IL-13 signal by the IL-13 receptor α 2 chain in bronchial epithelial cells. *Cytokine* 24: 293-303.
- Yoshikawa, M., et al. 2003. TNF α and IL-4 regulate expression of IL-13 receptor α 2 on human fibroblasts. *Biochem. Biophys. Res. Commun.* 312: 1248-1255.
- Kawakami, M., et al. 2004. Analysis of interleukin-13 receptor α 2 expression in human pediatric brain tumors. *Cancer* 101: 1036-1042.
- Myrtek, D., et al. 2004. Expression of interleukin-13 receptor α 1 subunit on peripheral blood eosinophils is regulated by cytokines. *Immunology* 112: 597-604.

CHROMOSOMAL LOCATION

Genetic locus: IL13RA2 (human) mapping to Xq23.

SOURCE

IL-13R α 2 (YY-23Z) is a mouse monoclonal antibody raised against an extracellular domain of IL-13R α 2 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

RESEARCH USE

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

APPLICATIONS

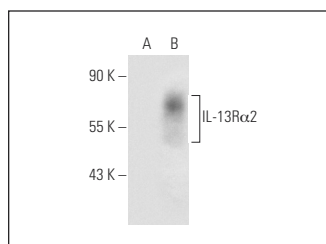
IL-13R α 2 (YY-23Z) is recommended for detection of IL-13R α 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for IL-13R α 2 siRNA (h): sc-63339, IL-13R α 2 shRNA Plasmid (h): sc-63339-SH and IL-13R α 2 shRNA (h) Lentiviral Particles: sc-63339-V.

Molecular Weight of IL-13R α 2: 44 kDa.

Positive Controls: IL-13R α 2 (h): 293T Lysate: sc-114972 or HeLa whole cell lysate: sc-2200.

DATA



IL-13R α 2 (YY-23Z): sc-74160. Western blot analysis of IL-13R α 2 expression in non-transfected: sc-117752 (A) and human IL-13R α 2 transfected: sc-114972 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Leung, K.W., et al. 2009. Bacterial endotoxin activates retinal pigment epithelial cells and induces their degeneration through IL-6 and IL-8 autocrine signaling. *Mol. Immunol.* 46: 1374-1386.
- Balyasnikova, I.V., et al. 2012. Characterization and immunotherapeutic implications for a novel antibody targeting interleukin (IL)-13 receptor α 2. *J. Biol. Chem.* 287: 30215-30227.

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.