IL-13Rα2 (h): 293T Lysate: sc-114972



The Power to Question

BACKGROUND

The Th2 cytokine interleukin-13 (IL-13) plays a critical role in allergen-induced airway hyper-responsiveness (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

- 1. Guo, J., et al. 1997. Chromosome mapping and expression of the human interleukin-13 receptor. Genomics 42: 141-145.
- 2. 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.
- 3. Wu, A.H., et al. 2002. Molecular cloning of the rat IL-13 α 2 receptor cDNA and its expression in rat tissues. J. Neurooncol. 59: 99-105.
- 4. 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.
- 5. 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.
- 6. 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.
- 7. Kawakami, M., et al. 2004. Analysis of interleukin-13 receptor $\alpha 2$ expression in human pediatric brain tumors. Cancer 101: 1036-1042.
- 8. 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.

PRODUCT

IL-13R α 2 (h): 293T Lysate represents a lysate of human IL-13R α 2 transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

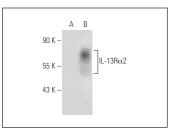
APPLICATIONS

lL-13R α 2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive IL-13R α 2 antibodies. Recommended use: 10-20 μ l per lane

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

IL-13R α 2 (YY-23Z): sc-74160 is recommended as a positive control antibody for Western Blot analysis of enhanced human IL-13R α 2 expression in IL-13R α 2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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 I wsates.

PROTOCOLS

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