SANTA CRUZ BIOTECHNOLOGY, INC.

IL-13Rα2 (M-15): sc-27866



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 2 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.
- 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 $\alpha 2$ on human fibroblasts. Biochem. Biophys. Res. Commun. 312: 1248-1255.
- 7. Kawakami, M., et al. 2004. Analysis of interleukin-13 receptor α 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: II13ra2 (mouse) mapping to X F2.

SOURCE

IL-13R α 2 (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IL-13R α 2 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-27866 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-13R α 2 (M-15) is recommended for detection of IL-13R α 2 (also designated as CD213a2) of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-13R α 2 siRNA (m): sc-63340, IL-13R α 2 shRNA Plasmid (m): sc-63340-SH and IL-13R α 2 shRNA (m) Lentiviral Particles: sc-63340-V.

Molecular Weight of IL-13Ra2: 44 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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

MONOS Satisfation Guaranteed

Try **IL-13R\alpha2 (2K8): sc-134363**, our highly recommended monoclonal alternative to IL-13R α 2 (M-15).