SANTA CRUZ BIOTECHNOLOGY, INC.

IL-13Rα2 (N-20): sc-27863

SANTA CRUZ BIOTECHNOLOGY

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-13Rα1 and 2. IL-13Rα1 exists as a heterodimer of IL-13Rα1 and IL-4Rα as a signaling subunit, whereas IL-13Rα2 acts as a decoy receptor for IL-13. Furthermore, TNFα or IL-4 stimulation induces IL-13Rα2 upregulation, while IL-13Rα1 is constitutively expressed. Cell surface localization of IL-13Rα2 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-13Rα1 expression is predominant in B cells, monocytes and T cells, whereas IL-13Rα2 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 α1 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 α2 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 α2 on human fibroblasts. Biochem. Biophys. Res. Commun. 312: 1248-1255.
7. Kawakami, M., et al. 2004. Analysis of interleukin-13 receptor α2 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; Il13ra2 (mouse) mapping to X F2.

SOURCE

IL-13Rα2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of IL-13Rα2 of human origin.

STORAGE

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

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-27863 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-13Rα2 (N-20) is recommended for detection of precursor and mature IL-13Rα2 (also designated as CD213α2) of mouse, rat and human 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).

IL-13Rα2 (N-20) is also recommended for detection of precursor and mature IL-13Rα2 (also designated as CD213α2) in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IL-13Rα2 siRNA (h): sc-63339, IL-13Rα2 siRNA (m): sc-63340, IL-13Rα2 shRNA Plasmid (h): sc-63339-SH, IL-13Rα2 shRNA Plasmid (m): sc-63340-SH, IL-13Rα2 shRNA (h) Lentiviral Particles: sc-63339-V and IL-13Rα2 shRNA (m) Lentiviral Particles: sc-63340-V.

Molecular Weight of IL-13Rα2: 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) Immunofluorescence: 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.

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.