

IL-13R α 1 (I-15): sc-27861

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. The human IL-13R gene maps to chromosome Xq24. 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

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- 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 hyper-responsiveness 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.
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- 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: IL13RA1 (human) mapping to Xq24; Il13ra1 (mouse) mapping to X A3.3.

SOURCE

IL-13R α 1 (I-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IL-13R α 1 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27861 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-13R α 1 (I-15) is recommended for detection of IL-13R α 1 (also designated as CD213 α 1) 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-13R α 1 (I-15) is also recommended for detection of IL-13R α 1 (also designated as CD213 α 1) in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IL-13R α 1 siRNA (h): sc-63337, IL-13R α 1 siRNA (m): sc-63338, IL-13R α 1 shRNA Plasmid (h): sc-63337-SH, IL-13R α 1 shRNA Plasmid (m): sc-63338-SH, IL-13R α 1 shRNA (h) Lentiviral Particles: sc-63337-V and IL-13R α 1 shRNA (m) Lentiviral Particles: sc-63338-V.

Molecular Weight of IL-13R α 1: 48 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.

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.
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RESEARCH USE

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