

# IL-13R $\alpha$ 1 (H-300): sc-25849

## 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 $\alpha$ 1 and 2. IL-13R $\alpha$ 1 exists as a heterodimer of IL-13R $\alpha$ 1 and IL-4R $\alpha$  as a signaling subunit, whereas IL-13R $\alpha$ 2 acts as a decoy receptor for IL-13. Furthermore, TNF $\alpha$  or IL-4 stimulation induces IL-13R $\alpha$ 2 upregulation, while IL-13R $\alpha$ 1 is constitutively expressed. Cell surface localization of IL-13R $\alpha$ 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 $\alpha$ 1 expression is predominant in B cells, monocytes and T cells, whereas IL-13R $\alpha$ 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  $\alpha$ 1 expression on B cells, T cells and monocytes and its regulation by IL-13 and IL-4. *Eur. J. Immunol.* 28: 4286-4298.

## CHROMOSOMAL LOCATION

Genetic locus: IL13RA1 (human) mapping to Xq24; Il13ra1 (mouse) mapping to X A3.1.

## SOURCE

IL-13R $\alpha$ 1 (H-300) is a rabbit polyclonal antibody raised against amino acids 128-427 mapping at the C-terminus of IL-13R $\alpha$ 1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

IL-13R $\alpha$ 1 (H-300) is recommended for detection of IL-13R $\alpha$ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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 $\alpha$ 1 (H-300) is also recommended for detection of IL-13R $\alpha$ 1 (also designated as CD213a1) in additional species, including canine and bovine.

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

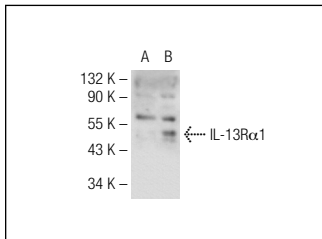
Molecular Weight of IL-13R $\alpha$ 1: 48 kDa.

Positive Controls: IL-13R $\alpha$ 1 (h): 293T Lysate: sc-175871

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



IL-13R $\alpha$ 1 (H-300): sc-25849. Western blot analysis of IL-13R $\alpha$ 1 expression in non-transfected: sc-117752 (A) and human IL-13R $\alpha$ 1 transfected: sc-175871 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Fritz, D.K., et al. 2009. Oncostatin M (OSM) primes IL-13- and IL-4-induced eotaxin responses in fibroblasts: regulation of the type-II IL-4 receptor chains IL-4R $\alpha$  and IL-13R $\alpha$ 1. *Exp. Cell Res.* 315: 3486-3499.
- White, S.R., et al. 2010. Expression of IL-4/IL-13 receptors in differentiating human airway epithelial cells. *Am. J. Physiol. Lung Cell Mol. Physiol.* 299: L681-L693.
- Ait-Bara, S. and Carpousis, A.J. 2010. Characterization of the RNA degradationosome of *Pseudoalteromonas haloplanktis*: conservation of the RNase E-RhlB interaction in the gammaproteobacteria. *J. Bacteriol.* 192: 5413-5423.

## 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.


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Satisfaction  
Guaranteed

Try **IL-13R $\alpha$ 1 (D-2): sc-398831** or **IL-13R $\alpha$ 1 (GM-1E7): sc-101382**, our highly recommended monoclonal alternatives to IL-13R $\alpha$ 1 (H-300).