

# IL-13R $\alpha$ 2 (2K8): sc-134363

## 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. 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.
- Wu, A.H., et al. 2002. Molecular cloning of the rat IL-13  $\alpha$ 2 receptor cDNA and its expression in rat tissues. *J. Neurooncol.* 59: 99-105.

## CHROMOSOMAL LOCATION

Genetic locus: IL13RA2 (human) mapping to Xq23; Il13ra2 (mouse) mapping to X F2.

## SOURCE

IL-13R $\alpha$ 2 (2K8) is a mouse monoclonal antibody raised against amino acids 27-127 of IL-13R $\alpha$ 2 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

IL-13R $\alpha$ 2 (2K8) is recommended for detection of IL-13R $\alpha$ 2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-13R $\alpha$ 2 siRNA (h): sc-63339, IL-13R $\alpha$ 2 siRNA (m): sc-63340, IL-13R $\alpha$ 2 shRNA Plasmid (h): sc-63339-SH, IL-13R $\alpha$ 2 shRNA Plasmid (m): sc-63340-SH, IL-13R $\alpha$ 2 shRNA (h) Lentiviral Particles: sc-63339-V and IL-13R $\alpha$ 2 shRNA (m) Lentiviral Particles: sc-63340-V.

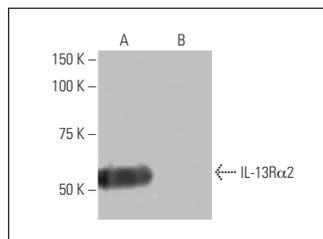
Molecular Weight of IL-13R $\alpha$ 2: 44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, human IL-13R $\alpha$ 2 transfected 293T whole cell lysate or L8 cell lysate: sc-3807.

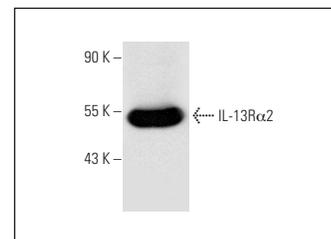
## STORAGE

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

## DATA



IL-13R $\alpha$ 2 (2K8): sc-134363. Western blot analysis of IL-13R $\alpha$ 2 expression in human IL-13R $\alpha$ 2 transfected (A) and non-transfected (B) 293T whole cell lysates.



IL-13R $\alpha$ 2 (2K8): sc-134363. Western blot analysis of IL-13R $\alpha$ 2 expression in L8 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Hjort, M.A., et al. 2018. Phosphatase of regenerating liver-3 (PRL-3) is overexpressed in classical Hodgkin lymphoma and promotes survival and migration. *Exp. Hematol. Oncol.* 7: 8.
- Bartolomé, R.A., et al. 2018. An IL-13R $\alpha$ 2 peptide exhibits therapeutic activity against metastatic colorectal cancer. *Br. J. Cancer* 119: 940-949.
- Liu, Q., et al. 2022. Extracellular vesicles extracted from bone marrow mesenchymal stem cells carrying MicroRNA-342-3p inhibit the INHBA/IL-13R $\alpha$ 2 axis to suppress the growth and metastasis of breast cancer. *Transl. Oncol.* 18: 101333.
- Mali, A.S. and Novotny, J. 2022. Opioid receptor activation suppresses the neuroinflammatory response by promoting microglial M2 polarization. *Mol. Cell. Neurosci.* 121: 103744.
- Jannoo, R., et al. 2023. Targeting of the interleukin-13 receptor IL-13R $\alpha$ 2 expressing prostate cancer by a novel hybrid lytic peptide. *Biomolecules* 13: 356.
- Jannoo, R., et al. 2023. Targeting and sensitization of breast cancer cells to killing with a novel interleukin-13 receptor  $\alpha$ 2-specific hybrid cytolytic peptide. *Cancers* 15: 2772.
- Xu, W., et al. 2024. IL13R $\alpha$ 2 as a crucial receptor for Chi311 in osteoclast differentiation and bone resorption through the MAPK/AKT pathway. *Cell Commun. Signal.* 22: 81.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.