

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

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

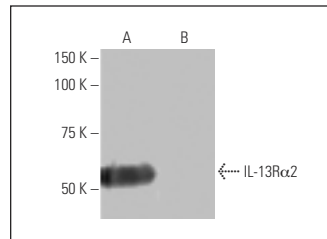
IL-13R α 2 (2K8) is recommended for detection of IL-13R α 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

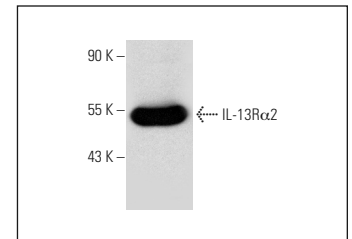
Molecular Weight of IL-13R α 2: 44 kDa.

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

DATA



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



IL-13R α 2 (2K8): sc-134363. Western blot analysis of IL-13R α 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 α 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 α 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.

RESEARCH USE

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

PROTOCOLS

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