SANTA CRUZ BIOTECHNOLOGY, INC.

IL-13Rα1 (D-2): sc-398831

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.

CHROMOSOMAL LOCATION

Genetic locus: IL13RA1 (human) mapping to Xq24; Il13ra1 (mouse) mapping to X A3.3.

SOURCE

IL-13Rα1 (D-2) is a mouse monoclonal antibody raised against amino acids 128-427 mapping at the C-terminus of IL-13Rα1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-13Rα1 (D-2) is available conjugated to agarose (sc-398831 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398831 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398831 PE), fluorescein (sc-398831 FITC), Alexa Fluor® 488 (sc-398831 AF488), Alexa Fluor® 546 (sc-398831 AF546), Alexa Fluor® 594 (sc-398831 AF594) or Alexa Fluor® 647 (sc-398831 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398831 AF680) or Alexa Fluor® 790 (sc-398831 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

IL-13Rα1 (D-2) is recommended for detection of IL-13Rα1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for IL-13Rα1 siRNA (h): sc-63337, IL-13Rα1 siRNA (m): sc-63338, IL-13Rα1 shRNA Plasmid (h): sc-63337-SH, IL-13Rα1 shRNA Plasmid (m): sc-63338-SH, IL-13Rα1 shRNA (h) Lentiviral Particles: sc-63337-V and IL-13Rα1 shRNA (m) Lentiviral Particles: sc-63338-V.

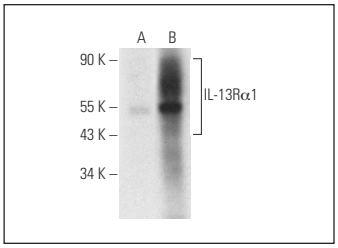
Molecular Weight of IL-13Rα1: 48 kDa.

Positive Controls: IL-13Rα1 (h): 293T Lysate: sc-175871.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IL-13Rα1 (D-2): sc-398831. Western blot analysis of IL-13Rα1 expression in non-transfected: sc-117752 (**A**) and human IL-13Rα1 transfected: sc-175871 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. 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.
2. Gao, C., et al. 2020. Autophagy activation represses pyroptosis through the IL-13 and JAK1/STAT1 pathways in a mouse model of moderate traumatic brain injury. ACS Chem. Neurosci. 11: 4231-4239.
3. Yamakawa, D., et al. 2022. Cilia-mediated Insulin/Akt and ST2/JNK signaling pathways regulate the recovery of muscle injury. Adv. Sci. E-published.

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.