SANTA CRUZ BIOTECHNOLOGY, INC.

IL-3/IL-5/GM-CSFRβ (1C1): sc-21765

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Interleukin-3, or IL-3, is a pleiotropic cytokine that is primarily secreted by activated T lymphocytes and stimulates the proliferation and differentiation of hematopoietic cells. IL-3 not only supports growth of both pluripotent stem cells and the more differentiated committed progenitors, but it also stimulates the functional activity of some fully differentiated cells. IL-3 has also been shown to protect mast cells from undergoing apoptosis. IL-3 exerts its biological effects through a receptor which consists of a ligand-specific α subunit and a signal transducing β subunit common to the IL-3/IL-5/GM-CSF receptors. The carboxy terminus of the β subunit has been shown to be necessary for activation of the MAP kinase signaling pathway. Although the IL-3 receptor has no intrinsic kinase activity, stimulation with IL-3 leads to tyrosine phosphorylation of the JAK/Tyk 2 family member, JAK2, which in turn activates and causes nuclear translocation of Stat5a and Stat5b.

CHROMOSOMAL LOCATION

Genetic locus: CSF2RB (human) mapping to 22q12.3.

SOURCE

IL-3/IL-5/GM-CSFRβ (1C1) is a mouse monoclonal antibody raised against IL-3/IL-5/GM-CSFRβ 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-3/IL-5/GM-CSFRβ (1C1) is available conjugated to agarose (sc-21765 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-21765 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-21765 PE), fluorescein (sc-21765 FITC), Alexa Fluor® 488 (sc-21765 AF488), Alexa Fluor® 546 (sc-21765 AF546), Alexa Fluor® 594 (sc-21765 AF594) or Alexa Fluor® 647 (sc-21765 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-21765 AF680) or Alexa Fluor® 790 (sc-21765 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IL-3/IL-5/GM-CSFRβ (1C1) is recommended for detection of 130 kDa β chain common to IL-3R, IL-5R and GM-CSFR of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for IL-3/IL-5/GM-CSFRβ siRNA (h): sc-35658, IL-3/IL-5/GM-CSFRβ shRNA Plasmid (h): sc-35658-SH and IL-3/IL-5/GM-CSFRβ shRNA (h) Lentiviral Particles: sc-35658-V.

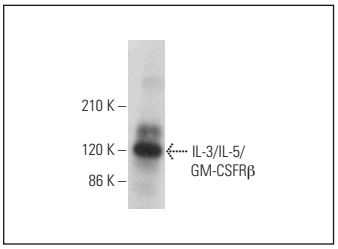
Molecular Weight of IL-3/IL-5/GM-CSFRβ: 130 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, HuT 78 whole cell lysate: sc-2208 or HL-60 whole cell lysate: sc-2209.

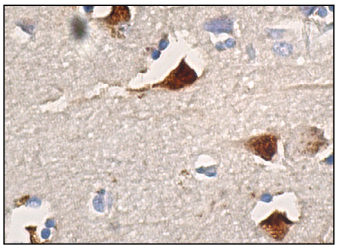
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IL-3/IL-5/GM-CSFRβ (1C1): sc-21765. Western blot analysis of IL-3/IL-5/GM-CSFRβ expression in human fetal brain tissue extract. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



IL-3/IL-5/GM-CSFRβ (1C1): sc-21765. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells.

SELECT PRODUCT CITATIONS

1. Chamorro, M.E., et al. 2013. Signaling pathways of cell proliferation are involved in the differential effect of erythropoietin and its carbamylated derivative. Biochim. Biophys. Acta 1833: 1960-1968.
2. Chamorro, M.E., et al. 2015. Protein tyrosine phosphatase 1B (PTP1B) is involved in the defective erythropoietic function of carbamylated erythropoietin. Int. J. Biochem. Cell Biol. 61: 63-71.

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.

PROTOCOLS

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