SANTA CRUZ BIOTECHNOLOGY, INC.

IL-13 (F-6): sc-390676

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Interleukin-13, or IL-13, is a pleiotropic cytokine that exhibits 30% sequence identity with IL-4 and shares many of the same biological activities. Like IL-4, IL-13 affects monocytes, macrophages and B cells by upregulating the expression of CD23 and MHC proteins, and downregulating the expression of CD14. Both IL-4 and IL-13 are secreted by activated T lymphocytes and are powerful regulators of inflammation. Both inhibit the secretion of proinflammatory cytokines and chemokines from activated monocytes and stimulate the expression of IgE on activated B cells. IL-13 contains five Cysteine residues and multiple N-linked glycosylation sites and has been reported to inhibit the production of IL-2 in natural killer cells. IL-13 cDNA encodes a 131 amino acid precursor with a 20 amino acid signal peptide which is cleaved to generate a mature protein.

REFERENCES

1. Minty, A., et al. 1993. Interleukin-13 is a new human lymphokine regulating inflammatory and immune responses. Nature 362: 248-250.
2. Zurawski, G., et al. 1994. Interleukin-13 elicits a subset of the activities of its close relative interleukin-4. Stem Cells 12: 169-174.
3. Deleuran, B., et al. 1995. Interleukin-13 suppresses cytokine production and stimulates the production of 15-HETE in PBMC. A comparison between IL-4 and IL-13. Cytokine 7: 319-324.

CHROMOSOMAL LOCATION

Genetic locus: IL13 (human) mapping to 5q31.1.

SOURCE

IL-13 (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 104-132 of IL-13 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-13 (F-6) is available conjugated to agarose (sc-390676 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390676 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390676 PE), fluorescein (sc-390676 FITC), Alexa Fluor® 488 (sc-390676 AF488), Alexa Fluor® 546 (sc-390676 AF546), Alexa Fluor® 594 (sc-390676 AF594) or Alexa Fluor® 647 (sc-390676 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390676 AF680) or Alexa Fluor® 790 (sc-390676 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390676 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

IL-13 (F-6) is recommended for detection of IL-13 of 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).

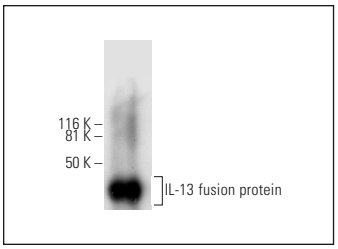
Suitable for use as control antibody for IL-13 siRNA (h): sc-39642, IL-13 shRNA Plasmid (h): sc-39642-SH and IL-13 shRNA (h) Lentiviral Particles: sc-39642-V.

Molecular Weight of IL-13: 13 kDa.

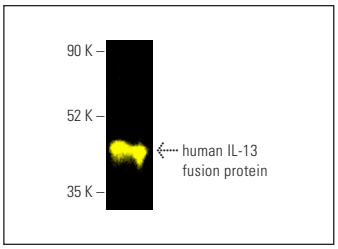
RECOMMENDED SUPPORT REAGENTS

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-13 (F-6): sc-390676. Western blot analysis of human recombinant IL-13 fusion protein.



IL-13 (F-6): sc-390676. Fluorescent western blot analysis of human recombinant IL-13 fusion protein. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 488: sc-533661.

SELECT PRODUCT CITATIONS

1. Ganieva, U., et al. 2020. Involvement of transcription factor 21 in the pathogenesis of fibrosis in endometriosis. Am. J. Pathol. 190: 145-157.
2. Baban, B., et al. 2021. AMPK induces regulatory innate lymphoid cells after traumatic brain injury. JCI Insight 6: 126766.
3. Lohova, E. and Pilmane, M. 2022. Expression of MUC-2, MUC-6, NAPE-PLD, IL-6 and IL-13 in healthy and metaplastic bronchial epithelium. Diseases 11: 5.

RESEARCH USE

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