SANTA CRUZ BIOTECHNOLOGY, INC.

IL-13 (M-17): sc-1776

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.
4. Katz, Y., et al. 1995. IL-13 results in differential regulation of the complement proteins C3 and factor B in tumour necrosis factor (TNF)-stimulated fibroblasts. Clin. Exp. Immunol. 101: 150-156.
5. Cosentino, G., et al. 1995. IL-13 down-regulates CD14 expression and TNF-α secretion in normal human monocytes. J. Immunol. 155: 3145-3151.
6. de Vries, J.E., et al. 1995. Immunoregulatory properties of IL-13: its potential role in atopic disease. Int. Arch. Allergy Immunol. 106: 175-179.

CHROMOSOMAL LOCATION

Genetic locus: Il13 (mouse) mapping to 11 B1.3.

SOURCE

IL-13 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IL-13 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1776 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

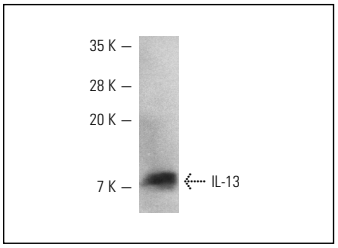
APPLICATIONS

IL-13 (M-17) is recommended for detection of IL-13 of mouse 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

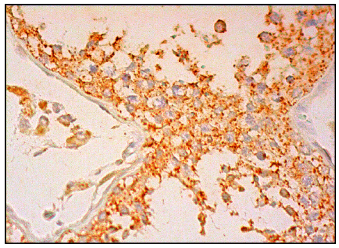
Suitable for use as control antibody for IL-13 siRNA (m): sc-39643, IL-13 shRNA Plasmid (m): sc-39643-SH and IL-13 shRNA (m) Lentiviral Particles: sc-39643-V.

Molecular Weight of IL-13: 13 kDa.

DATA



IL-13 (M-17): sc-1776. Western blot analysis of mouse recombinant IL-13.



IL-13 (M-17): sc-1776. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Matsushita, M., et al. 2004. Upregulation of interleukin-13 and its receptor in a murine model of bleomycin-induced scleroderma. Int. Arch. Allergy Immunol. 135: 348-356.
2. Hocke, A.C., et al. 2006. Regulation of interleukin IL-4, IL-13, IL-10, and their downstream components in lipopolysaccharide-exposed rat lungs. Comparison of the constitutive expression between rats and humans. Cytokine 33: 199-211.
3. Silva, A.C., et al. 2012. Exercise inhibits allergic lung inflammation. Int. J. Sports Med. 33: 402-409.
4. Hao, Y., et al. 2012. Pseudomonas aeruginosa pyocyanin causes airway goblet cell hyperplasia and metaplasia and mucus hypersecretion by inactivating the transcriptional factor FoxA2. Cell. Microbiol. 14: 401-415.
5. Vieira, R.P., et al. 2013. Exercise Deactivates Leukocytes in Asthma. Int. J. Sports Med. 35: 629-635.