

IL-3 (H-8): sc-515305

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.

REFERENCES

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2. Cockayne, D.A., Abrams, J.S. and Nienhuis, A.W. 1992. Antisense RNA inhibition of hematopoietic growth factor production. Growth Factors 5: 171-181.
3. Abrams, J.S., Roncarolo, M.G., Yssel, H., Andersson, U., Gleich, G.J. and Silver, J.E. 1992. Strategies of anti-cytokine monoclonal antibody development: immunoassay of IL-10 and IL-5 in clinical samples. Immunol. Rev. 127: 5-24.
4. Magnelli, L., Cinelli, M., Turchetti, A. and Chiarugi, V.P. 1993. Apoptosis induction in 3ZD cells by IL-3 withdrawal is preceded by a drop in the intracellular calcium level. Biochem. Biophys. Res. Commun. 194: 1394-1397.
5. Sander, B., Höiden, I., Andersson, U., Möller, E. and Abrams, J.S. 1994. Similar frequencies and kinetics of cytokine producing cells in murine peripheral blood and spleen. Cytokine detection by immunoassay and intracellular immunostaining. J. Immunol. Methods 166: 201-214.

CHROMOSOMAL LOCATION

Genetic locus: Il3 (mouse) mapping to 11 B1.3.

SOURCE

IL-3 (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 57-83 within an internal region of IL-3 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515305 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

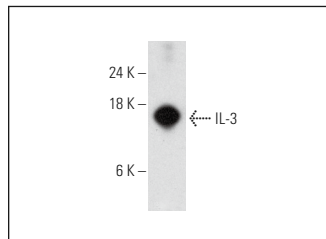
APPLICATIONS

IL-3 (H-8) is recommended for detection of IL-3 of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-3 siRNA (m): sc-39622, IL-3 shRNA Plasmid (m): sc-39622-SH and IL-3 shRNA (m) Lentiviral Particles: sc-39622-V.

Molecular Weight of IL-3: 15 kDa.

DATA



IL-3 (H-8): sc-515305. Western blot analysis of mouse recombinant IL-3.

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.