

IL-3 (N-16): sc-34805

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

- Abrams, J.S. and Pearce, M.K. 1988. Development of rat anti-mouse interleukin-3 monoclonal antibodies which neutralize bioactivity *in vitro*. *J. Immunol.* 140: 131-137.
- Cockayne, D.A., Abrams, J.S. and Nienhuis, A.W. 1992. Antisense RNA inhibition of hematopoietic growth factor production. *Growth Factors* 5: 171-181.
- 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.
- Magnelli, L., Cinelli, M., Turchetti, A. and Chiarugi, V.P. 1993. Apoptosis induction in 32D cells by IL-3 withdrawal is preceded by a drop in the intracellular calcium level. *Biochem. Biophys. Res. Commun.* 194: 1394-1397.
- Sander, B., Hoiden, 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.
- Abrams, J. 1995. Immunoenzymetric assay of mouse and human cytokines using NIP-labeled anti-cytokine antibodies. In Coligam, J., Kruisbeek, A., Margulies, D., Shevach, E. and Strober, W., eds., *Current Protocols in Immunology*. New York: John Wiley and Sons, Unit 6.20.
- Kinoshita, T., Yokota, T., Arai, K. and Miyajima, A. 1995. Suppression of apoptotic death in hematopoietic cells by signalling through the IL-3/GM-CSF receptors. *EMBO J.* 14: 266-275.

CHROMOSOMAL LOCATION

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

SOURCE

IL-3 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IL-3 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34805 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

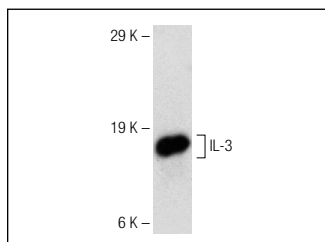
IL-3 (N-16) is recommended for detection of IL-3 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

Positive Controls: Hs 294T whole cell lysate.

DATA



IL-3 (N-16): sc-34805. 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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **IL-3 (G-11): sc-398210** or **IL-3 (F-6): sc-398177**, our highly recommended monoclonal alternatives to IL-3 (N-16).