

IL-3 (F-6): sc-398177

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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- Magnelli, L., et al. 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.
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- Kinoshita, T., et al. 1995. Suppression of apoptotic death in hematopoietic cells by signalling through the IL-3/GM-CSF receptors. *EMBO J.* 14: 266-275.
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- Bagley, C.J., et al. 1995. Interaction of GM-CSF and IL-3 with the common β -chain of their receptors. *J. Leukoc. Biol.* 57: 739-746.

CHROMOSOMAL LOCATION

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

SOURCE

IL-3 (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 117-146 at the C-terminus of IL-3 of mouse origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-398177 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

IL-3 (F-6) 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).

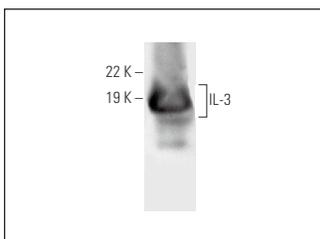
Suitable for use as control antibody for IL-3 siRNA (m): sc-39622, IL-3 shRNA Plasmid (m): sc-39622-SH and IL-3 shRNA (m) Lentiviral Particles: sc-39622-V.

Molecular Weight of IL-3: 15 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-3 (F-6): sc-398177. 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.

PROTOCOLS

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