

IL-3 (hBA-133): sc-4594

BACKGROUND

Interleukin-3, or IL-3, is a pleiotropic, 15 kDa 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 70 kDa ligand-specific α subunit and a 120-140 kDa 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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SOURCE

IL-3 (hBA-133) is produced in *E. coli* as 42 kDa biologically active, GST-tagged fusion protein corresponding to 133 amino acids of IL-3 of human origin.

PRODUCT

IL-3 (hBA-133) is purified from bacterial lysates (>98%); supplied as 50 μ g purified protein.

RESEARCH USE

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

BIOLOGICAL ACTIVITY

IL-3 (hBA-133) is biologically active as determined by the dose-dependent stimulation of the proliferation of human TF-1 cells.

Expected ED₅₀: <0.1 ng/ml.

Specific Activity: Greater than 1 x 10⁷ units/mg.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PROTOCOLS

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