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 Stat5α and Stat5β.

REFERENCES

SOURCE
IL-3 (mBA-139) is produced in E. coli as 42 kDa biologically active, GST-tagged fusion protein corresponding to 139 amino acids of IL-3 of mune origin.

PRODUCT
IL-3 (mBA-139) is purified from bacterial lysates (>98%); supplied as 50 µg purified protein.

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