

IL-3

Interleukin 3, mast cell growth factor human, recombinant, *E. coli*

Cat. No.	Amount
PR-462	10 μ g

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized.

Solubility

It is recommended to reconstitute the lyophilized IL-3 in bidest H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

ED₅₀: < 0.1 ng/ml, corresponding to a specific activity of 2 x 10⁶ IU/mg, determined by the dose-dependent stimulation of TF-1 cells.

Endotoxin

Less than 0.1 ng/ μ g (IEU/ μ g) of IL-3.

Molecular Weight

15 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

Interleukin-3 (IL-3) is a cytokine produced by activated T-cells and mast cells that has been shown to stimulate renewal of pluripotent hematopoietic stem cells and to be a potent regulator of many hematopoietic cell lineages.

It is involved in stimulating inducible hematopoiesis in response to parasite infections, and it has also been implicated in the pathogenesis of several chronic inflammatory diseases, including asthma, and neurodegenerative disorders, such as multiple sclerosis.

Recombinant human IL-3 produced in *E. coli* is a single, non-glycosylated form of human IL-3 polypeptide chain containing 133 amino acids and having a molecular mass of 15 kDa.

IL-3 is purified by proprietary chromatographic techniques.

Selected References:

- Murphy *et al.* (2004) Interleukin-3 binding to the murine beta11-3 and human beta2c receptors involves functional epitopes formed by domains 1 and 4 of different protein chains. *J. Biol. Chem.* **279**:26500.
- Cohen *et al.* (2004) Toxicology and pharmacokinetics of DT388IL3, a fusion toxin consisting of a truncated diphtheria toxin (DT388) linked to human interleukin 3 (IL3), in cynomolgus monkeys. *Leuk. Lymphoma.* **45**:1647.
- Ding *et al.* (2003) Molecular cloning, expression, purification, and characterization of soluble full-length, human interleukin-3 with a baculovirus-insect cell expression system. *Protein Expr. Purif.* **31**:34.
- Biesma *et al.* (2002) Recombinant human interleukin-3 administered concomitantly with chemotherapy in patients with relapsed small cell lung cancer. *J. Exp. Ther. Oncol.* **2**:47.
- Zanetta *et al.* (2002) Evidence for a lectin activity for human interleukin 3 and modeling of its carbohydrate recognition domain. *J. Biol. Chem.* **277**:38764.