

# Recombinant Human Interleukin-3 (IL-3). Animal and Endotoxin free

CATALOGUE NUMBER: AMS-628

AVAILABLE SIZES: 10µg, 50µg, 100µg and 1000µg

## DESCRIPTION

IL-3 (Interleukin-3, Hematopoietic growth factor, Mast cell growth factor), a pleiotropic growth factor, is mainly produced by activated T-cells, but is also produced by keratinocytes, NK-cells, mast cells, endothelial cells and monocytes. IL-3 promotes proliferation and differentiation of various hematopoietic cell types, including pluripotent stem cells and more committed progenitors. IL-3 also affects activity of mature hematopoietic cells and often functions in combination with other cytokines. Human IL-3 is species-specific and shows no biological activity on murine cells. Recombinant human IL-3 is a 17 kDa globular protein consisting of 133 amino acid residues.

## SOURCE

recombinant human IL-3 is produced in the endosperm tissue of barley grain (*Hordeum vulgare*), that exhibits up to 50 times less protease activity than *E.coli* or mammalian cells. Barley seed is void of any human or animal viral contaminants that could jeopardize your cell culture.

## FORMULATION

Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH 7.2

## PURITY

Greater than 95% by SDS-PAGE gel analysis.

## RECONSTITUTION

Note: Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

## STABILITY

The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

## BIOLOGICAL ACTIVITY

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of recombinant human IL-3 was determined by its dose-dependent effects on the proliferation of TF-1 cells. The ED50 value for this effect is typically < 0.2 ng/ml, corresponding to a specific activity of > 5 x 10<sup>6</sup> units/mg. Optimal concentration should be determined for specific applications and cell lines.

## ENDOTOXIN LEVEL

Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg) as measured by turbidimetric kinetic assay. Ref. Associates of Cape Cod Industries, Deacon Park, Knowsley, Liverpool, UK.

## MAT assay

Purified product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction. Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland

## MOLECULAR WEIGHT

Recombinant human IL-3 contains 133 amino acids and a 16 a.a. histidine-based tag for a total length of 149 a.a. and has a predicted molecular mass of 17.2 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 20-23 kDa in SDS-PAGE

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