

## PRODUCT DESCRIPTION

Interleukin-3 (IL-3) is a species-specific pleiotropic cytokine produced primarily by activated T cells. IL-3 stimulates the proliferation and differentiation of hematopoietic stem cells,<sup>1</sup> as well as various lineage-committed progenitors. The methionyl form of recombinant rat IL-3 contains 143 amino acids and has a predicted molecular mass of approximately 16.3 kDa.<sup>2</sup>

## SOURCE

A DNA sequence corresponding to the mature rat IL-3 protein sequence (Ile 27 – Cys 169)<sup>2</sup> was expressed in *E. coli*.

## PURITY

Purity is greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is <1.0 EU per 1 µg cytokine, as determined by the LAL method.

## ACTIVITY

The biological activity of recombinant rat IL-3 is measured in a cell proliferation assay using the factor-dependent mouse myeloblastic cell line, NFS-60.<sup>3</sup> The ED<sub>50</sub> is typically 4 - 16 ng/mL.

## FORMULATION

Recombinant rat IL-3 is lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS) containing 50 µg bovine serum albumin per 1 µg cytokine.

## RECONSTITUTION

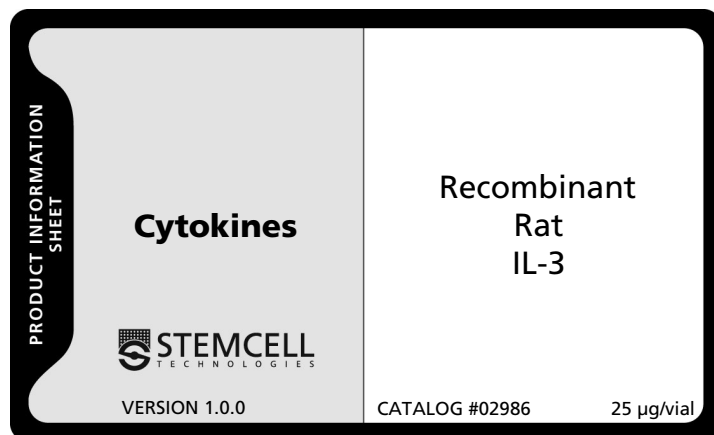
**Centrifuge vial prior to opening.** Reconstitute rat IL-3 at a concentration greater than 10 µg/mL with sterile PBS containing at least 0.1% human or bovine serum albumin.

## STABILITY AND STORAGE

Lyophilized rat IL-3 is stable for up to twelve months from date of receipt at -20°C to -70°C.

Reconstituted rat IL-3 can be stored under sterile conditions at 2 - 8°C for one month, or at -20°C to -70°C (in a manual defrost freezer) for three months without detectable loss of activity.

**Avoid repeated freezing and thawing.**



## REFERENCES

1. Martinez-Moczygamba M, Huston DP: Biology of common beta receptor-signaling cytokines: IL-3, IL-5, and GM-CSF. *J Allergy Clin Immunol* 112: 653-665, 2003
2. del C Esandi M, van Someren GD, van der Velde I, van Bekkum DW, Valerio D, Noteboom JL, Bout A: Cloning, biological characterization and high-level expression of rat interleukin-3 using recombinant adenovirus: description of a new splicing variant. *Gene* 211: 151-158, 1998
3. Holmes KL, Palaszynski E, Fredrickson TN, Morse HC 3<sup>rd</sup>, Ihle JN: Correlation of cell-surface phenotype with the establishment of interleukin 3-dependent cell lines from wild-mouse murine leukemia virus-induced neoplasms. *Proc Natl Acad Sci USA* 82: 6687-6691, 1985