

Product Information

Interleukin-4, rat recombinant, expressed in *E. coli*

Catalog Number **I3650**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: IL-4, rIL-4, B cell stimulatory factor-1, BSF-1, T cell growth factor-2, TCGF-2, mast-cell growth factor-2, MCGF-2

Product Description

Interleukin-4 (IL-4) is a lymphokine with profound effects on the growth and differentiation of immunologically competent cells.¹ It is a complex, monomeric glycoprotein with a molecular mass of 13–18 kDa. IL-4 is released by a subset of activated T cells, eosinophils, mast cells, and basophils.^{2,3} Interleukin-4 is involved in the development of asthma and allergic inflammation.^{4,5}

This recombinant IL-4 consists of amino acids 25–147 with an N-terminal Met and a predicted molecular mass of 13.5 kDa. It is lyophilized from a 0.2 μm filtered solution of phosphate buffered saline (PBS), pH 7.4, containing 50 μg of BSA per 1 μg of cytokine.

Purity: $\geq 97\%$ (SDS-PAGE)

The proliferative activity of recombinant, rat IL-4 is tested in culture using rat splenocytes. The EC_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Endotoxin level: < 1.0 EU per μg cytokine (LAL method)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the contents of the vial using 0.2 μm filtered PBS containing at least 0.1% HSA or BSA to prepare a working stock solution of $\geq 10\text{ }\mu\text{g/ml}$ of the cytokine. Additional filtration of the stock solution is not recommended and may result in product loss due to adsorption onto the filter membrane.

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$.

After reconstitution, store at $2\text{--}8\text{ }^{\circ}\text{C}$ for one month. For extended storage, freeze in working aliquots at $-20\text{ }^{\circ}\text{C}$ for three months. Prolonged storage of product or repeated freezing and thawing is not recommended.

References

1. Howard, M. et al., J. Exp. Med., **155**, 914 (1982).
2. Benczik, M., and Gaffen, S.L., Immunol. Invest., **33**, 109-142 (2004).
3. Chormarat, P., and Banchereau, J., Int. Rev. Immunol., **17**, 1-4 (1998).
4. Rosenberg, H.F. et al., J. Allergy Clin. Immunol., **119**, 1303-1310 (2007).
5. Ryan, J.J. et al., Crit. Rev. Immunol., **27**, 15-32 (2007).

ADM,DAA,JWM,MAM 04/11-1

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