

Product Information

HumanKine™ Interleukin-4, human recombinant, expressed in HEK 293 cells

Catalog Number **H7291**

Storage Temperature –20 °C

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

Product Description

HumanKine™ IL-4, expressed in human 293 cells, is a glycosylated monomer with an apparent molecular mass of 14–19 kDa due to glycosylation, which is absent when this cytokine is expressed in *E. coli*. Production in human 293 cells offers authentic glycosylation. Glycosylation contributes to stability in cell growth media and other applications. Human and mouse IL-4 share a 50% amino acid sequence homology, but their biological actions are species-specific.²

Interleukin-4 is a complex glycoprotein released by a subset of activated T cells, mast cells, and basophils.¹ It is a pleiotropic cytokine that has profound effects on the growth and differentiation of immunologically competent cells.¹ IL-4 regulates differentiation of naïve CD4+ T cells to the TH2 type. IL-4 also regulates IgE and IgG1 production by B cells.

This product is lyophilized from a solution of 20 mM Tris-HCl, pH 7.4, with 300 mM NaCl.

ED₅₀: ≤1.0 ng/mL

The specific activity was determined by the dose-dependent simulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line).

Purity: ≥95% (SDS-PAGE)

Endotoxin level: ≤1 EU/μg

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

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile PBS containing 0.1% endotoxin-free recombinant human serum albumin

Storage/Stability

Store the product at –20 °C. The lyophilized product remains active for one year at –20 °C.

Upon reconstitution, the cytokine can be stored at 2–8 °C for short term only, or at –20 °C to –80 °C in aliquots for long term. Avoid repeated freeze-thaw cycles.

References

1. Howard, M. et al., J. Exp. Med., **155**, 914 (1982).
2. Yokota, T. et al., Immunol. Rev., **102**, 139 (1988).

HumanKine is a trademark of HumanZyme Inc.

GS,JF,MAM 12/10-1

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.