

Recombinant Human Interleukin-4

#R00039

Size: 5 µg/100 µg/500 µg

Stability & Storage

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
 - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
 - 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Interleukin-4 (IL-4) is a pleiotropic cytokine that induces differentiation of naive helper T cells (Th0 cells) to Th2 cells and produced by by mast cells, activated T cells and bone marrow stromal cells. It has many biological roles, including the stimulation of activated B-cell and T-cell proliferation, and the differentiation of CD4+ T-cells into Th2 cells. In addition, It enhances both secretion and cell surface expression of IgE and IgG1 and also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. The human IL-4 has a compact, globular fold, stabilised by 3 disulphide bonds. The human IL-4 shares about 40% aa sequence identity with mouse/rat IL-4 and they are species-specific in their activities.

AA Sequence

HKCDITLQEIIKTLNSLTEQKTLCTELTVTDIFAASKNTT
EKETFCRAATVLRQFYSHHEKDTRCLGATAQQFHRH

KQLIRFLKRLDRNLWGLAGLNSCPVKEANQSTLENFL
ERLKTIMREKYSKCSS

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	BSF-1, Binetrakin, Lymphocyte stimulatory factor 1, Pitrakinra.
Accession	P05112
GeneID	3565
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 15.0 kDa, a single non-glycosylated polypeptide chain containing 129 amino acids.
Purity	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using human TF-1 cells is less than 0.2 ng/ml, corresponding to a specific

	activity of $> 5.0 \times 10^6$ IU/mg.
Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1.0 EU/ μ g of rHuL-4 as determined by LAL method.
