



## PRODUCT DATA SHEET

**Product:** IL-4 (recombinant human)

**Cat. No.:** BC-276 (20 µg)

**Synonyms:**

Interleukin-4 precursor, B-cell stimulatory factor 1, BSF-1, Lymphocyte stimulatory factor 1, Binetrakin, Pitrakinra.

**Background:**

Interleukin-4 (IL-4), produced primarily by CD4(+) T cells is an immunomodulatory cytokine, which can inhibit the growth of tumor cells. IL-4 has been known as a Th2 cytokine and can act on B cells, T cells, and monocytes. IL-4 exhibits anti-tumor activity in rodent experimental gliomas, which is likely mediated by the actions of IL-4 on a variety of immune cells present in and around the tumor masses.

**Description:**

Recombinant human IL-4 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 130 amino acids and having a molecular mass of 15,000 Dalton.

**Amino Acid Sequence:**

The sequence of the first five N-terminal amino acids was determined to be Met-His-Lys-Cys-Asp.

**Origin:**

Produced in *E. Coli*.

**Format:**

Sterile filtered white powder. Lyophilized from 1 mg/mL solution in water containing no additives.

**Purity:**

Greater than 98.0% as determined by RP-HPLC, anion-exchange FPLC, reducing and non-reducing SDS-PAGE Silver Stained gel. Dimers and aggregates: less than 1% as determined by silver-stained SDS-PAGE.

**Endotoxin:**

Less than 0.1 ng/µg (IEU/µg) of recombinant human IL-4.

**Reconstitution:**

Reconstitute in sterile 18MΩ-cm H<sub>2</sub>O at not less than 100 µg/mL, which can then be further diluted to other aqueous solutions.

**Biological Activity:**

Recombinant human Interleukin-4 is fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of TF-1 cells is less than 0.2 ng/mL, corresponding to a specific activity of  $5 \times 10^6$  IU/mg.

**Storage:**

Lyophilized recombinant human IL-4, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution recombinant human IL-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Limitations:**

For *in vitro* research use only. Not for use in diagnostics or in humans.

**Warranty:**

No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.