



Recombinant Human Interleukin-4 (research grade) (rHuIL-4)

Certificate of Analysis and Data Sheet

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 15000 Dalton. The rHuIL-4 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation & packaging: Lyophilized from a concentrated (1mg/ml) solution in water containing no additives.

Solubility: The lyophilized rHuIL-4 is very soluble in water and most aqueous buffers below and above the isoelectric point.

Stability: Lyophilized rHuIL-4 although stable at room temperature, should be stored desiccated below 0°C. Reconstituted rHuIL-4 is best stored refrigerated at 4°C.

Purity: Greater than 99.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Anion-exchange FPLC.
- (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.

(Limit of acceptance: 98.0%. No more than 2% total impurities; no single impurity greater than 1%)

Amino Acid Composition: In total agreement with the expected amino acid composition of native human IL-4.

Amino acid sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-His-Lys-Cys-Asp, conforming to the sequence of native human IL-4.

Dimers and aggregates: Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

Biological Activity: ProSpec's rHuIL-4 is fully biologically active when compared to standard.

The ED50 as determined by the dose-dependant stimulation of TF-1 cells is < 0.1 ng/ml, corresponding to a Specific Activity of 13 x10⁶ IU/mg.

Endotoxin: Less than 0.1 ng/μg (IEU/μg) of rHuIL-4.

Protein content: Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm.
2. Analysis by RP-HPLC, using a calibrated solution of IL-4 as a Reference Standard.

Usage: This material is offered by Gentaur BVBA for research applications.