



## PRODUCT DATA SHEET

**Product:** IL-5 (recombinant human)

**Cat. No.:** BC-278 (10 µg)

**Synonyms:**

Interleukin-54 precursor, T-cell replacing factor, TRF, Eosinophil differentiation factor, B-Cell differentiation factor 1

**Background:**

Interleukin-5 (IL-5), also known as eosinophil differentiation factor (EDF), is a lineage-specific cytokine for eosinophilopoiesis. It regulates eosinophil growth and activation, and thus plays an important role in diseases associated with increased levels of eosinophils, including asthma. IL-5 has a similar overall fold to other cytokines (e.g., IL-2, IL-4 and GCSF), but while these exist as monomeric structures, IL-5 is a homodimer. The fold contains an anti-parallel 4-alpha-helix bundle with a left-handed twist, connected by a 2-stranded anti-parallel beta-sheet. The monomers are held together by 2 interchain disulphide bonds.

**Description:**

Recombinant Human IL-5 produced in E.Coli is a dimeric, non-glycosylated polypeptide chain containing 132 amino acids and having a molecular mass of 26,522.84 Dalton. The recombinant human IL-5 is purified by proprietary chromatographic techniques.

**Amino Acid Sequence:**

The sequence of the first five N-terminal amino acids was determined to be Met-Ile-Pro-Thr-Glu.

**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-5.

**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 IL-5 is fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of the proliferation of TF-1 cells was found to be less than 0.15 ng/mL, corresponding to a specific activity of  $6 \times 10^6$  IU/mg.

**Storage:**

Lyophilized recombinant human IL-5, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution recombinant human IL-5 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.