



Recombinant Protein Technical Manual

**Recombinant Human Interleukin-4/IL-4 Protein
(Active)**
RPES2502

Product Data:

Product SKU: RPES2502

Size: 10µg

Species: Human

Expression host: E. coli

Uniprot: P05112

Protein Information:

Molecular Mass: 15.1 kDa

AP Molecular Mass: 134 kDa

Tag:

Bio-activity: Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 7-27 pg/mL.

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.4.

Reconstitution: Please refer to the printed manual for detailed information.

Application: Cell Culture

Synonyms: Interleukin-4; IL-4; B-Cell Stimulatory Factor 1; BSF; Binetrakin; Lymphocyte Stimulatory Factor 1; Pitrakinra; IL4

Immunogen Information:

Sequence: His25-Ser153

Background:

Interleukin-4 (IL-4) is a pleiotropic cytokine that regulates diverse T and B cell responses including cell proliferation, survival and gene expression. IL-4 is produced by mast cells, T cells, and bone marrow stromal cells. IL-4 regulates the differentiation of naive CD4⁺ T cells into helper Th2 cells, characterized by their cytokine-secretion profile that includes secretion of IL-4, IL-5, IL-6, IL-10, and IL-13, which favor a humoral immune response. Another dominant function of IL-4 is the regulation of immunoglobulin class switching to the IgG1 and IgE isotypes. Excessive IL-4 production by Th2 cells has been associated with elevated IgE production and allergic response.