

## Human Nonlytic IL-4/Fc Fusion Protein

**CATALOG#:** HF-22104**QUANTITY:** 10 µg**MOLECULAR STRUCTURE:****TRANSFECTANT CELL LINE:****STORAGE CONDITIONS:****PRODUCT STABILITY:****SHIP DATE:****ACTIVITY RANGE:****LOT#:****CONCENTRATION:** 0.1 mg/ml

A soluble 98 kd dimeric fusion protein consisting of human IL-4 fused to mutant human IgG1 Fc.

NS.1 cells

Store stock solution at <-20<sup>0</sup>C. Store working solution at 4<sup>0</sup>C. Freeze/Thawing is not recommended.Product should retain for at least one year after shipping date when stored at <-20<sup>0</sup>C and the working solution should retain for at least one week at 4<sup>0</sup>C.

Measured using CTLL-s indicator cells.

Specific Activity: 1-1.5 x10<sup>6</sup> Units/mg\*.**FORMULATION:** IL-4/Fc is supplied as a frozen liquid comprised of 0.22 µm sterile-filtered PBS (PH 7.4, 50 mM Sodium Phosphate, 100 mM Potassium Chloride, 150 mM NaCl) and containing no preservatives.**PRODUCTION:** Nonlytic human IL-4/Fc fusion protein was purified from tissue culture supernatant of NS.1 transfectants. Purity was >98% by SDS-PAGE. The endotoxin level is ≤0.1 EU per µg of IL-4/Fc.**INFORMATION:** IL-4 is a cytokine produced by type 2 helper T cells, the Th2 cells. These cells tends to make a specific set of lymphokines including IL-4, IL-5, IL-6, IL-10, IL-13, IL-3 and GM-CSF and fail to produce IL-2, IFN $\gamma$ , and lymphotoxin (TNF $\beta$ ) (1). In addition, mast cells can produce IL-4 (2). IL-4 exerts numerous effects on various hematopoietic cell types. On B cells, IL-4 promotes immunoglobulin class switching to IgE and IgG1 isotypes and upregulates MHC class II and CD23 expression (3, 4). IL-4 promotes survival, growth, and differentiation of both T and B lymphocytes, mast cells and endothelial cells (1, 5). In addition, IL-4 inhibits the production of TNF, IL-1, and IL-6 by macrophages (6). A non-cytolytic human IL-4/Fc fusion protein is made by genetically fusing IL-4 to mutant human IgG1 Fc. This fusion protein possesses both the biological functions of the IL-4 moiety and a prolonged circulating half-life determined by the Fc domain. Mutations to the complement (C1q) and Fc $\gamma$ R I binding sites of the IgG1 Fc fragment render IL-4/Fc incapable to direct antibody directed cytotoxicity (ADCC) and complement directed cytotoxicity (CDC) (7, 8).

\* Unit defined using rhIL-4 as the reference in a CTLL2 cell proliferation assay.

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**This Product is intended for Laboratory Research use only.****Chimerigen Laboratories**[www.chimerigen.com](http://www.chimerigen.com)

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