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## Recombinant Human Interleukin-16 (IL16)

(Cat. No.: C045)

### Background:

IL-16 is a CD8<sup>+</sup> T cell-derived cytokine that induces chemotaxis of CD4<sup>+</sup> T cells and CD4<sup>+</sup> monocytes and eosinophils. Analysis by gel filtration suggests that, under physiological conditions, human IL-16 exists predominantly as a noncovalently linked multimer, but that some IL-16 may exist as a monomer. However, only the multimeric form appears to possess chemotactic activity, suggesting that receptor cross-linking may be required for activity. IL-16 also induces expression of IL-2 receptor (IL-2R) and MHC class II molecules on CD4<sup>+</sup> T cells. Human and murine IL-16 show significant cross-species reactivity

### Description:

Recombinant Human IL-16 produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 130 amino acids and having a molecular mass of 13.4 kDa.

### Quality Control:

**Biological activity:** rHuIL-16 is fully biologically active when compared to standard. The ED50 as determined by its ability to chemoattract human CD4<sup>+</sup> T lymphocytes using a concentration range of 10.0-100.0 ng/ml, corresponding to a Specific Activity greater than  $1.0 \times 10^4$  IU/mg.

**Purity:** Greater than 97.0% as determined by:

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

**Amino-Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Met-Pro-Asp-Leu-Asn.

**Endotoxin:** Less than 0.1ng/μg (1IEU/μg) determined by LAL test.

**Formulation:** rHuIL-16 was lyophilized from 1mg/ml solution after extensive dialysis against 20 mM acetic buffer, pH 5.0, 150 mM NaCl and 0.5 mM DTT.

**Storage:** Lyophilized rHuIL-16 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuIL-16 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).

**Please avoid freeze-thaw cycles.**

**Reconstitution:** It is recommended to reconstitute the lyophilized rHuIL-16 in sterile 18MΩ-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

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