Recombinant Porcine Interleukin-8 / 1-72 a.a. (rp IL-8/CXCL8)

**Synonyms:** MDNCF, T-cell chemotactic factor, NAP-1, Protein 3-10C, GCP-1, MONAP, Emoctakin

**Introduction:** Interleukin-8 (IL-8) is a chemokine produced by macrophages and other cell types such as epithelial cells. It is also synthesized by endothelial cells, which store IL-8 in their storage vesicles, the Weibel-Palade bodies. When first encountering an antigen, the primary cells to encounter it are the macrophages that phagocytose the particle. Upon processing, they release chemokines to signal other immune cells to come in to the site of inflammation. IL-8 is one such chemokine. It serves as a chemical signal that attracts neutrophils at the site of inflammation, and therefore is also known as Neutrophil Chemotactic Factor.

**Description:** rp Interleukin-8 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 72 amino acids and having a molecular mass of 8291 Dalton. The IL-8 is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a concentrated solution containing no additives. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery.

**Solubility:** It is recommended to reconstitute the lyophilized rp IL-8 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rp IL-8, although stable at room temperature for 3 weeks, should be stored desiccated below –18° C. Upon reconstitution rp IL-8 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 prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

**Amino acid sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Thr-Trp-Gln-His-Val.

**Biological Activity:** The biological activity of IL8 was determined by the dose dependent mobilization of intracellular calcium (calcium flux) with human neutrophils and was found to be >1.0 ng/ml.

**Protein Content:** Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.638 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of IL-8 as a Reference Standard.

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