



# Recombinant Protein Technical Manual

## Recombinant Human IL-8/CXCL8 Protein

RPE5193

### Product Data:

**Product SKU:** RPE5193

**Size:** 50µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_000575.1

### Protein Information:

**Molecular Mass:** 8.5 kDa

**AP Molecular Mass:** 12 kDa

**Tag:**

**Bio-activity:**

**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 sterile 100mM NaCl, 50mM Tris, pH 7.5

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

**Application:**

**Synonyms:** Interleukin-8; IL-8; C-X-C Motif Chemokine 8; Emotakin; Granulocyte Chemotactic Protein 1; GCP; Monocyte-Derived Neutrophil Chemotactic Factor; MDNCF; Monocyte-Derived Neutrophil-Activating Peptide; MONAP; Neutrophil-Activating Protein 1; NAP; Protein 30C; T-Cell Chemotactic Factor; GCP1;IL8;Interleukin-8;LECT;LUCT;LYNAP;MDNCF;MONAP;NAF;NAP;NAP1

## Immunogen Information:

**Sequence:** Ser 28-Ser 99

## Background:

Interleukin 8 (IL-8), also known as CXCL8, which is a chemokine with a defining CXC amino acid motif that was initially characterized for its leukocyte chemotactic activity, is now known to possess tumorigenic and proangiogenic properties as well. This chemokine is secreted by a variety of cell types including monocyte/macrophages, T cells, neutrophils, fibroblasts, endothelial cells, and various tumor cell lines in response to inflammatory stimuli (IL1, TNF, LPS, etc). In human gliomas, IL-8 is expressed and secreted at high levels both in vitro and in vivo, and recent experiments suggest it is critical to glial tumor neovascularity and progression. Levels of IL-8 correlate with histologic grade in glial neoplasms, and the most malignant form, glioblastoma, shows the highest expression in pseudopalisading cells around necrosis, suggesting that hypoxia/anoxia may stimulate expression. Interleukin (IL)-8/CXCL8 is a potent neutrophil chemotactic factor. Accumulating evidence has demonstrated that various types of cells can produce a large amount of IL-8/CXCL8 in response to a wide variety of stimuli, including proinflammatory cytokines, microbes and their products, and environmental changes such as hypoxia, reperfusion, and hyperoxia. Numerous observations have established IL-8/CXCL8 as a key mediator in neutrophil-mediated acute inflammation due to its potent actions on neutrophils. However, several lines of evidence indicate that IL-8/CXCL8 has a wide range of actions on various types of cells, including lymphocytes, monocytes, endothelial cells, and fibroblasts, besides neutrophils. The discovery of these biological functions suggests that IL-8/CXCL8 has crucial roles in various pathological conditions such as chronic inflammation and cancer. IL-8 has been associated with tumor angiogenesis, metastasis, and poor prognosis in breast cancer. IL-8 may present a novel therapeutic target for estrogen driven breast carcinogenesis and tumor progression.