

Product Name: Biotin-CXCL8 (IL-8)

Catalog Numbers: B-CXCL8-2ug B-CXCL8-10ug B-CXCL8-50ug B-CXCL8-100ug

DESCRIPTION**Source** E. coli derived Accession # P10145 (28-99)**Modification** Biotinylated**Predicted Molecular Mass** 10,803.49 Da**Extinction Coefficient** 12,900 M⁻¹ cm⁻¹**SPECIFICATIONS****Activity** EC50 = 0.5-1nM determined by Migration Assay in cells expressing recombinant CXCR1**Actual Molecular Mass
(Mass Spec)** 10,803 Da by ESI Mass Spec**Endotoxin Level** <0.01 EU per 1µg of the protein by the LAL method**Purity** > 97% by SDS PAGE**Formulations** Lyophilized**Carrier Protein** None**PREPARATION AND STORAGE****Reconstitution** Spin tube prior to resuspending. Recommended at 100µg/mL in sterile water**Shipping** Room Temp**Stability and Storage****Avoid repeated freeze-thaw cycles**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- Suggest to use immediately after reconstitution
- At least 1 month at -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND**Description**

Interleukin 8 (IL-8) (CXCL8) is secreted primarily by macrophages and monocytes. It is one of the key mediators for inflammatory responses. IL-8 is a strong chemotactant for neutrophils and monocytes, and promotes activation of these target cells by binding to two cell surface receptors CXCR1 and CXCR2. It is also a strong angiogenic agent, and is considered to play a role in the pathogenesis of bronchiolitis.

Biotinylated CXCL8 is made using the enzymatic method, which has several advantages over chemical biotinylation methods. The attachment of biotin at a specific lysine residue is nearly 100% complete, and leads to a modified chemokine with functionalities comparable to those of the unmodified CXCL8 in migration assay. Utilizing avidin/streptavidin analogues conjugated to various fluorescent labels, biotinylated CXCL8 is useful in studies on receptor identification, distribution, chemokine binding, and other cellular assays. They serve as great tools in visualization and quantification, and can replace radioactively labeled chemokines.

References:

1. "Interleukin-8, a chemotactic and inflammatory cytokine" Baggiolini M., Clark-Lewis I. FEBS Lett. 307:97-101 (1992)
2. "Molecular cloning of a human monocyte-derived neutrophil chemotactic factor (MDNCF) and the induction MDNCF mRNA by interleukin 1 and tumor necrosis factor" Matsushima K., Morishita K., Yoshimura T., Lavu S., Kobayashi Y., Lew W., Appella E., Kung H., Leonard E.J., Oppenheim J.J. J. Exp. Med. 167:1883-1893 (1988)
3. "Chemokines, CXCL8" Strieter R.M., Keane M.P., Belperio J. A. Encyclopedia of respiratory medicine, Academic Press, Oxford, P395-398(2006)