Human IL-8 / CXCL8 Protein (aa 28-99)

Catalog Number: **10098-HNCH2**

General Information

Gene Name Synonym:

GCP-1; GCP1; IL-8; IL8; Interleukin-8; LECT; LUCT; LYNAP; MDNCF; MONAP; NAF; NAP-1; NAP1

Protein Construction:

The 72 amino acid residue form (Ser 28-Ser 99) of mature human IL8 (NP_000575.1) was expressed and purified.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ser 28

Molecular Mass:

The recombinant human cytokine IL8 isoform comprising 72 amino acids predicts a molecular mass of 8.5 kDa, and migrates as an approximately 12 kDa protein in SDS-PAGE.due to glycosylation.

Formulation:

Lyophilized from sterile 100mM NaCl, 50mM Tris, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

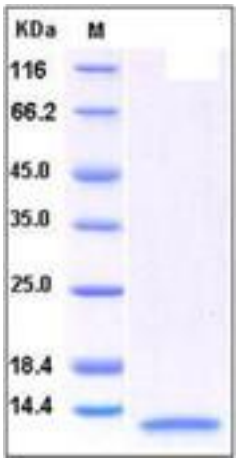
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1.Mukaida N. (2003) Pathophysiological roles of interleukin-8/CXCL8 in pulmonary diseases. Am J Physiol Lung Cell Mol Physiol. 284(4): L566-77.
2.Brat DJ, *et al.* (2005) The role of interleukin-8 and its receptors in gliomagenesis and tumoral angiogenesis. Neuro Oncol. 7(2): 122-33.
3.Bendrik C, *et al.* (2009) Estradiol increases IL-8 secretion of normal human breast tissue and breast cancer in vivo. J Immunol. 182(1): 371-8.