

Animal-Free IL-8/CXCL8 Protein, Human (His)

Cat. No.:	HY-P700133AF
Synonyms:	Interleukin-8; IL-8; C-X-C Motif Chemokine 8; Emoctakin; Granulocyte Chemotactic Protein 1; GCP-1; Monocyte-Derived Neutrophil Chemotactic Factor; MDNCF; Monocyte-Derived Neutrophil-Activating Peptide; MONAP; Neutrophil-Activating Protein 1; NAP-1; Protein 3-10C; T-Cell Chemotactic Factor; IL8; CXCL8
Species:	Human
Source:	E. coli
Accession:	P10145 (S28-S99)
Gene ID:	3576
Molecular Weight:	Approximately 9.32 kDa

PROPERTIES

AA Sequence	<p> M S A K E L R C Q C I K T Y S K P F H P K F I K E L R V I E S G P H C A N T E I I V K L S D G R E L C L D P K E N W V Q R V V E K F L K R A E N S </p>
Biological Activity	Measure by its ability to chemoattract PBMC. The ED ₅₀ for this effect is <2 ng/mL
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 8.0.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>IL-8/CXCL8 protein serves as a pivotal chemotactic factor, playing a central role in mediating inflammatory responses by attracting neutrophils, basophils, and T-cells to effectively clear pathogens and protect the host from infections. It also contributes significantly to neutrophil activation. Released in response to inflammatory stimuli, IL-8/CXCL8 exerts its effects by binding to G-protein-coupled receptors CXCR1 and CXCR2, primarily found in neutrophils, monocytes, and endothelial cells. The G-protein heterotrimer (alpha, beta, gamma subunits) constitutively binds to CXCR1/CXCR2 receptors, and activation by IL-8 leads to the release of beta and gamma subunits from G_α (GNAI2 in neutrophils) and subsequent activation of downstream signaling pathways, including PI3K and MAPK pathways. IL-8/CXCL8 forms homodimers, and this dimerization is disrupted by tick evasin-3. Furthermore, IL-8/CXCL8 interacts with TNFAIP6 via its Link domain, and this</p>
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interaction interferes with chemokine binding to glycosaminoglycans, suggesting a regulatory role in modulating chemokine activity within the inflammatory microenvironment.

Caution: Product has not been fully validated for medical applications. For research use only.

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