Cytokines

Human Recombinant IL-8 (CXCL8)

Interleukin 8

Catalog #	78084	5 µg
	78084.1	25 µg

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Product Description

Interleukin-8 (IL-8) is a member of the CXC subfamily of chemokines and is produced by leukocytic cells (monocytes, T cells, neutrophils, and natural killer cells) and non-leukocytic somatic cells (endothelial cells, fibroblasts, and epithelial cells), with the most prominent source being monocytes and macrophages. Its production is induced by inflammatory stimuli, such as IL-1. IL-8, also known as CXCL8, activates neutrophils inducing chemotaxis, exocytosis, and the respiratory burst (Baggiolini & Clark-Lewis; Mukaida). IL-8 is considered one of the most potent neutrophil chemoattractants in inflammation and binds to two different chemokine receptors on leukocytes: the G protein-coupled receptors CXCR1 and CXCR2 (Hoffmann et al.; de Oliveira et al.). IL-8 has angiogenic effects on human intestinal microvascular endothelial cells in vitro that are mediated by CXCR2 (Heidemann et al.). IL-8 is reported to promote breast cancer progression by increasing cell invasion, angiogenesis, and metastasis and has been reported to be involved in regulating breast cancer stem-like cells (Singh et al.). IL-8 also has proangiogenic properties in inflammatory diseases of the conjunctiva, cornea, iris, retina, and orbit (Ghasemi et al.). It was also shown that a major T cell effector function in human newborns is IL-8 production, which has the potential to activate antimicrobial neutrophils and gamma/delta T cells (Gibbons et al.). A variety of human pathogens, such as HIV and Mycobacterium tuberculosis, have been shown to induce IL-8 production by monocytes and macrophages (Friedland et al.; Meddows-Taylor et al.).

Product Information

Alternative Names:	CXC motif ligand 8, GCP-1, Granulocyte chemotactic protein 1, Interleukin-8, MDNCF, Monocyte-derived neutrophil chemotactic factor, NAF, NAP-1, Neutrophil activating factor, SCYB8, Small inducible cytokine subfamily B member 8
Accession Number:	P10145
Amino Acid Sequence:	AVLPRSAKEL RCQCIKTYSK PFHPKFIKEL RVIESGPHCA NTEIIVKLSD GRELCLDPKE NWVQRVVEKF LKRAENS
Predicted Molecular Mass:	8.9 kDa
Species:	Human
Cross Reactivity:	Mouse
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	E. coli

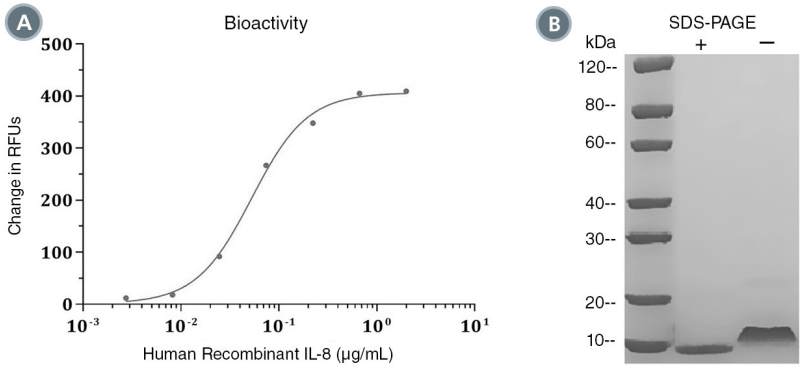
Specifications

Activity:	The specific activity is ≥ 6.7 x 10^3 units/mg (EC50 ≤ 0.15 µg/mL) as determined by Ca2+ mobilization assay in CHO-K1/Gα15/hCXCR1 cells (human Gα15 and human CXCR1 stably expressed in CHO-K1 cells).
Purity:	≥ 95 %
Endotoxin Level:	Measured by kinetic limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage:	Store at -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Resuspend the product in sterile water containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 2 weeks or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles. NOTE: If reconstituted product will be used immediately BSA is not required.

Data



(A) The biological activity of Human Recombinant IL-8 (CXCL8) was tested by its ability to mobilize Ca2+ in CHO-K1/Gα15/hCXCR1 cells (human Gα15 and human CXCR1 stably expressed in CHO-K1 cells). Ca2+ mobilization was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which Ca2+ mobilization is at 50% of maximum. The EC50 in the example above is less than 0.15 µg/mL.
(B) 2 µg of Human Recombinant IL-8 (CXCL8) was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-8 (CXCL8) has a predicted molecular mass of 8.9 kDa.

Related Products

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References

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