Human CXCL1 (GRO alpha) Recombinant Protein Carrier-Free

Catalog Number: 34-8942
Also known as: C-X-C motif Chemokine 1, Growth-Related Oncogene alpha
RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Human CXCL1 (GRO alpha) Recombinant Protein Carrier-Free
REF **Catalog Number:** 34-8942
Concentration: 0.5 mg/mL
Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment.
Source: E. coli expressed amino acids Ala35-Asn107, accession number NM_001511
Molecular Mass: 8 kDa
Purity: > 97%, as determined by SDS-PAGE.
Endotoxin: Less than 0.01 ng/ug cytokine, as determined by the LAL assay.
Bioactivity: The bioactivity of this protein was determined by transmigration assay of human neutrophils, with maximum chemotaxis observed at 50-100 ng/mL.

Formulation: Sterile liquid: 0.1 M glycine, pH 3.0
Temperature Limitation: Store at less than or equal to -70°C.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial

Description

CXCL1, or GRO (growth-related oncogene) alpha, is a pro-inflammatory CXC chemokine first identified by its constitutive overexpression in some tumors. It is closely related to CXCL2 (GRO beta) and CXCL3 (GRO gamma), with which it shares 90% and 86% sequence homology, respectively. These proteins, along with IL-8 or CXCL8, are critical for neutrophil mobilization and degranulation, as well as vascular permeabilization and angiogenesis. Signaling occurs through the G protein-coupled receptor CXCR2, which is shared with GRO beta and gamma.

CXCL1 is secreted by monocytes, epithelial cells, and fibroblasts in response to pro-inflammatory stimuli such as LPS, IL-1 beta, and TNF alpha. Overexpression is observed in many malignant tumors, where it contributes to tumor vascularization and metastasis.

Applications Reported

Human CXCL1 Recombinant Protein Carrier-Free is biologically active.

Applications Tested

The bioactivity of this protein was determined by transmigration assay of human neutrophils, with maximum chemotaxis observed at 50-100 ng/mL. The ED50 for this effect is less than or equal to 25 ng/mL, which corresponds to a specific activity of greater than or equal to 4 x 10e4 Units/mg.

References

DiStasi MR, Ley K. Opening the flood-gates: how neutrophil-endothelial interactions regulate permeability. Trends Immunol. 2009 Nov;30(11):547-56.

Fuhler GM, Knol GJ, Drayer AL, Vellenga E. Impaired interleukin-8 and GROalpha-induced phosphorylation of extracellular signal-regulated kinase result in decreased migration of neutrophils from patients with myelodysplasia. J Leukoc Biol. 2005 Feb;77(2):257-66.

Dhawan P, Richmond A. Role of CXCL1 in tumorigenesis of melanoma. J Leukoc Biol. 2002 Jul;72(1):9-18.

Related Products

12-1829 Anti-Human CD182 (CXCR2) PE (eBio5E8-C7-F10 (5E8-C7-F10))

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14-8089 Human IL-8 Recombinant Protein

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