

Recombinant Rat CXCL10/IP-10 (carrier free)

Catalog# / Size	770901 / 5 µg 770904 / 25 µg
Regulatory Status	RUO
Other Names	Small Inducible Cytokine Subfamily B (Cys-X-Cys), Member 10 (SCYB10), INP10, C-X-C Motif Chemokine Ligand 10, 10 kD Interferon Gamma-Induced Protein
Description	CXCL10 is an ELR-negative chemokine structurally and functionally related to CXCL9 and CXCL11. CXCL10, CXCL9, and CXCL11 are produced and secreted by monocytes, macrophages, fibroblasts, and epithelial cells upon stimulation with proinflammatory cytokines, especially IFN γ . CXCL10 chemoattracts CD4, CD8, NK, and NKT cells through the binding to its receptor CXCR3, which is shared with CXCL9 and CXCL11. In addition, CXCL10 inhibits neovascularization in tumors and in wound healing <i>in vivo</i> . Also, CXCL10 has anti-proliferative effects on endothelial cells <i>in vitro</i> , and angiostatic and antitumor effects <i>in vivo</i> . It has been suggested that the anti-proliferative effect of CXCL10 in endothelial cells is CXCR3-independent and that it is mediated through GAG interaction. CXCL10 also possesses antimicrobial activity against <i>E. coli</i> and <i>L. monocytogenes</i> , and both the spore and bacillus forms of <i>B. anthracis</i> . CXCL10 expression is strongly upregulated in many human inflammatory diseases, including rheumatoid arthritis, type I diabetes, multiple sclerosis, atherosclerosis, allograft rejection, and others.

Product Details

Source	Rat CXCL10 amino acids (Ile18 – Pro98) (Accession # NP_620789) was expressed in <i>E. coli</i> .
Molecular Mass	The 77 amino acid recombinant protein has a predicted molecular mass of approximately 8.67 kD. The predicted N-terminal amino acid is Ile.
Purity	>98% by SDS-PAGE gel and HPLC analyses.
Formulation	Lyophilized from 0.22 µm filtered protein solution in PBS, pH 7.2.
Endotoxin Level	Less than 0.1 EU per µg cytokine as determined by the LAL method.
Storage & Handling	Unopened vial can be stored at -20°C or -70°C. For maximum results, quick spin vial prior to opening. Reconstitute PBS to a concentration of 0.1 - 1.0 mg/ml. Do not vortex. It is recommended to further dilute in a buffer containing a carrier protein such as 0.1% BSA and store working aliquots at -20°C to -80°C. Avoid repeated freeze/thaw cycles.
Activity	Bioactivity was measured by its property to chemoattract BaF3-hCXCR3 transfectants in a dose dependent manner. The relative fluorescent units were obtained using Deep Blue Cell Viability™ Kit (Cat. No. 424701). The ED ₅₀ = 0.25 to 1.5 pg/ml.
Application	Bioassay

Antigen Details

Structure	Chemokine
Distribution	Interferon gamma-stimulated keratinocytes, monocytes, macrophages, fibroblasts, endothelial, T cells
Function	CXCL10 chemoattracts CD4, Th1, CD8, NK, and NKT cells. CXCL10 is induced by inflammatory cytokines, and NH ₂ -terminal cleavage of CXCL10 by DPP-IV/CD26 impairs its chemoattracting capacity and CXCR3 signaling.
Interaction	Activated T cells, Th1 cells, regulatory T cells, NK cells, NKT cells, endothelial cells, fibroblasts, and endothelial cells
Ligand/Receptor	CXCR3
Bioactivity	Rata CXCL10 chemoattracts BaF3-hCXCR3 transfectants.

Biology Area Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience

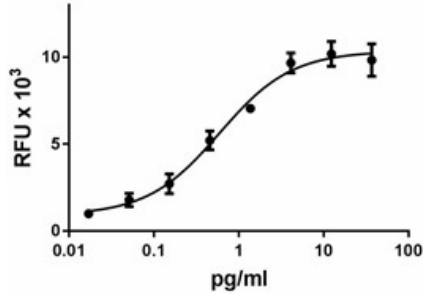
Molecular Family Cytokines/Chemokines

Antigen References

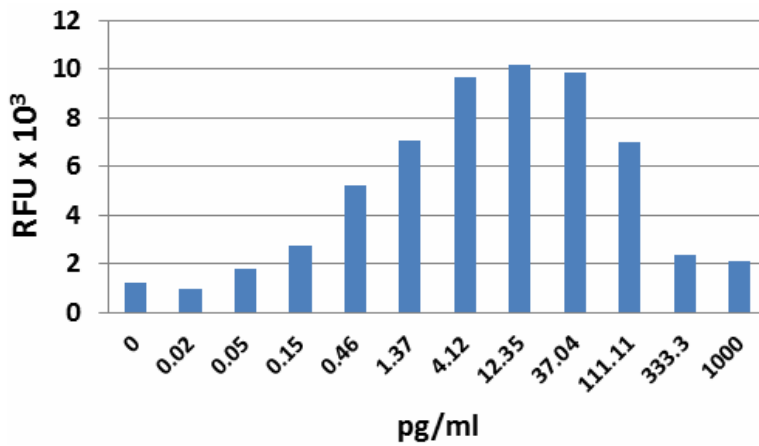
1. Luster AD, *et al.* 1985. *Nature* 315:672.
2. Loos T, *et al.* 2008. *Blood* 112:2648.
3. Crawford MA, *et al.* 2009. *Infect. Immun.* 77:1664.
4. Campanella GS, *et al.* 2010. *PLoS One* 5:e12700.
5. Hoerning A. 2011. *Eur. J. Immunol.* 41:2291.

Gene ID [245920](#)

Product Data



Rata CXCL10 chemoattracts BaF3-hCXCR3 transfectants in a dose dependent manner.



Rat CXCL10 chemoattracts BaF3-hCXCR3 transfectants.

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