

Recombinant Human CXCL12 (SDF-1 alpha)

Recombinant human protein expressed in E. coli cells

Catalog # S821-402N

Lot # G3211-20

Product Description

Recombinant Human CXCL12 (SDF-1 alpha) was expressed in E. coli cells. The protein accession number is [P48061](#).

Gene Aliases

Stromal cell-derived factor 1, SDF-1, hSDF-1, C-X-C motif chemokine 12, Intercrine reduced in hepatomas, IRH, hIRH, Pre-B cell growth-stimulating factor, PBSF, Recombinant Human Stromal Cell-Derived Factor-1 Alpha (CXCL12)

Endotoxin Level

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

Formulation

Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4

Reconstitution Protocol

A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.

Storage and Stability

The lyophilized protein is stable for at least one year from date of receipt at -70°C. Upon reconstitution, this cytokine can be stored in working aliquots at 2° - 8°C for one month, or at -20°C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

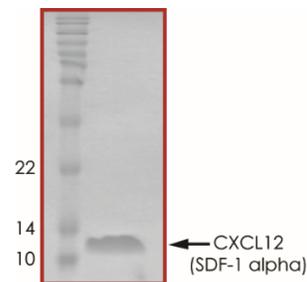
Scientific Background

SDF-1-alpha and SDF-1-beta are small cytokines belonging to the CXC-Chemokines. SDF-1 is identical with a chemokine reported to function as a pre-B-cell growth factor in the presence of IL-7 and isolated originally from a murine bone marrow stromal cell line. Human SDF-1-alpha and SDF-1-beta are encoded by a single gene and arise by alternative splicing. SDF-1 acts on lymphocytes and monocytes but not neutrophils in vitro and is a highly potent chemoattractant for mononuclear cells in vivo. In addition, SDF-1 also induces intracellular actin polymerization in lymphocytes. SDF acts as a chemoattractant for human hematopoietic progenitor cells expressing CD34 giving rise to mixed types of progenitors, and more primitive types. The chemotactic response is inhibited by pertussis toxin. Chemotaxis of CD34(+) cells in response to SDF is increased by IL-3 in vitro. SDF has been shown also to induce a transient elevation of cytoplasmic calcium in these cells.

Specific Activity

Determined by its ability to chemoattract human U937 expressing CXCR4 Determined by calcium flux with human U937 cells.

Purity



Recombinant Human CXCL12 (SDF-1 alpha) resolved on a 17% SDS-PAGE gel under non-reducing conditions and stained with Coomassie Brilliant Blue G-250

Approx. MW **8.0 kDa**

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Specific Lot Number	G3211-20
Purity	95%
Stability	6 mos. at -20°C from date of shipment
Storage & Shipping	The lyophilized protein is stable for at least one year from date of receipt at -70°C. Upon reconstitution, this cytokine can be stored in working aliquots at 2° - 8°C for one month, or at -20°C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

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