Recombinant Human CXCL12 (SDF-1 alpha)

Cat No:HR2R1304

For research use only

Overview

Quantity	10 ?g
Gene Symbol	CXCL12
Gene ID	6387
Accession	P48061
Alternative Name	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)
Species	Human
Source	E. coli
Description	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.
Functions	Determined by its ability to chemoattract human U937 expressing CXCR4 Determined by calcium flux with human U937 cells.
Formulation	Lyophilized from a 0.2 ?m filtered solution in PBS, pH 7.4
Solubility	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.
Appearance	Lyophilized Powder
Molecular Weight	8
Purity	>95% as determined by SDS-PAGE
Concentration	<1.0 EU/?g of recombinant protein as determined by the LAL method
Shipping Condition	Ambient Temperature

Storage Condition	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.