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32-1997: SDF 1g Recombinant Protein

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,CXCL12,SDF1,hSDF-1gamma,SDF-1g,TLSF,TPAR1,SCYB12.

Description

Source : Escherichia Coli. SDF-1 gamma Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 99 amino acids and having a molecular mass of 11.6kDa.The SDF-1g is purified by proprietary chromatographic techniques. SDF-1 (stromal cell-derived factor-1) is small cytokine belonging to the chemokine family that is officially designated Chemokine (C-X-C motif) ligand 12 (CXCL12). It is produced in two forms, SDF-1a/CXCL12a and SDF-1b/CXCL12b, by alternate splicing of the same gene. Chemokines are characterized by the presence of four conserved cysteines, which form two disulfide bonds. The CXCL12 proteins belong to the group of CXC chemokines, whose initial pair of cysteines are separated by one intervening amino acid. CXCL12 is strongly chemotactic for lymphocytes and has been implicated as an important cell co-ordinator during development. During embryogenesis it directs the migration of hematopoietic cells from foetal liver to bone marrow. Mice which were knocked-out for CXCL12 gene were lethal before the birth or within just 1 hour of life. As another role, CXCL12a alters also the electrophysiology of neurons. CXCL12 was shown to be expressend in many tissues in mice (including brain, thymus, heart, lung, liver, kidney, spleen and bone marrow).The receptor for this chemokine is CXCR4, which was previously called fusin. This CXCL12-CXCR4 interaction used to be considered exclusive (unlike for other chemokines and their receptors), but recently it was suggested that CXCL12 is also bound by CXCR7 receptor. The gene for CXCL12 is located on human chromosome 10. In human and mouse both CXCL12 and CXCR4 show high identity of sequence: 99% and 90%, respectively.

Product Info

Amount :	10 µg
Purification :	Greater than 96.0% as determined by:(a) Analysis by RP-HPLC.(b) Analysis by SDS-PAGE.
Content :	SDF-1g protein was lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
Storage condition :	Lyophilized SDF-1g although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution SDF-1 gamma should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.
Amino Acid :	GKPVSLSYRC PCRFFESHVA RANVKHLKIL NTPNCALQIV ARLKNNNRQV CIDPKLKWIQ EYLEKALNKG RREEKVGKKE KIGKKKRQKK RKAAQKRKN.

Application Note

It is recommended to reconstitute the lyophilized SDF-1g in sterile 18M-cm H2O not less than 100Ã‚Âµg/ml, which can then be further diluted to other aqueous solutions. The biological activity determined by a chemotaxis bioassay using PHA and rHuIL-2 activated human peripheral blood T-lymphocytes is in a concentration range of 30-100 ng/ml.