
Product Data Sheet

Product Name: SDF 1a Mouse, His
 Cat. No.: GP21211
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	SDF-1; CXCL12; Pre-B cell growth-stimulating factor;PBSF; hIRH; chemokine (C-X-C motif) ligand 12; SDF1; SDF1A; TPAR1; SCYB12;SDF-1a; TLSF-a; 12-O tetradecanoylphorbol 13-acetate repressed protein 1;Thymic lymphoma cell stimulating factor; TLSF.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSKPVLSY RCPCRFFESH IARANVKHLK ILNTPNCALQ IVARLKNNR QVCIDPKLKW IQEYLEKALN K.		
Formulation	SDF 1a protein solution (0.25mg/ml) containing PhosphateBuffered Saline (pH7.4) and 10% glycerol.		

Introduction

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-1 β /CXCL12a and SDF-1 γ /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 coordinator 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 expressed 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

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

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.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

SDF 1a Mouse Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 91 amino acids (22-89 a.a) and having a molecular mass of 10.4kDa. SDF 1a is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA