

DATASHEET

Version 20181206

SDF-1 α /CXCL12, Mouse**Cat. No.:** Z03306-25**Size:** 25.0 μ g**Synonyms:** SDF-1 α , Stromal-Cell Derived Factor-1, CXCL12, PBSF**Description:**

SDF-1 α and SDF-1 β , members of the chemokine α subfamily that lack the ELR domain, were initially identified using the signal sequence trap cloning strategy from a mouse bone-marrow stromal cell line. SDF-1 α and SDF-1 β cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1 α and SDF-1 β are encoded by a single gene and arise by alternative splicing. The two proteins are identical except for the four amino acid residues that are present in the carboxy-terminus of SDF-1 β and absent from SDF-1 α . SDF-1/PBSF is highly conserved between species, with only one amino acid substitution between the mature human and mouse proteins. SDF-1/PBSF acts via the chemokine receptor CXCR4 and has been shown to be a chemoattractant for T-lymphocytes, monocytes, pro- and pre-B cells, but not neutrophils. Mice lacking SDF-1 or CXCR4 have been found to have impaired B-lymphopoiesis, myelopoiesis, vascular development, cardiogenesis and abnormal neuronal cell migration and patterning in the central nervous system.

Recombinant Mouse SDF-1 α /CXCL12 produced in CHO cells is a polypeptide chain containing 68 amino acids. A fully biologically active molecule, rm SDF-1

β /CXCL12 has a molecular mass of 8 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Source: CHO

Biological Activity: The EC₅₀ value of mouse SDF-1 α /CXCL12 on Ca²⁺ mobilization assay in CHO-K1/G α 15/mCXCR4 cells (human G α 15 and mCXCR4 stably expressed in CHO-K1 cells) is less than 1.5 μ g/ml.

Molecular Weight: 8 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 μ g/ml.

Purity: > 95% as analyzed by SDS-PAGE.

Endotoxin Level: < 0.2 EU/ μ g, determined by LAL method.

Storage: Lyophilized recombinant Mouse SDF-1 α /CXCL12 remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Mouse SDF-1 α /CXCL12 should be stable up to 1 week at 4°C or up to 3 months at -20°C.