

SDF-1 α (CXCL12a)

CATALOG NUMBER: SDF-A1-010P, 10 μ g

Introduction	<p>The stromal cell-derived factor 1 (SDF-1) also known as C-X-C motif chemokine 12 (CXCL12) is a chemokine protein that in humans is encoded by the CXCL12 gene. SDF-1 is produced in two forms, SDF-1α/CXCL12a and SDF-1β/CXCL12b, by alternate splicing of the same gene.</p> <p>SDF-1 functions as the ligand for the G-protein coupled receptor, chemokine (C-X-C motif) receptor 4 (CXCR4), and plays a role in many diverse cellular functions, including embryogenesis, immune surveillance, inflammation response, tissue homeostasis, and tumor growth and metastasis. Mutations in this gene are associated with resistance to human immunodeficiency virus type 1 infections.</p>
Description	<p>Recombinant human SDF-1α produced in <i>E.coli</i> is a single, non-glycosylated, polypeptide chain containing 68 amino acids (Lys22-Lys89) and having a molecular mass of approximately 8 kDa.</p>
Source	<p><i>E. coli</i>.</p>
Purity	<p>$\geq 98\%$ purity (by SDS PAGE and HPLC)</p>
Endotoxin Level	<p>≤ 1 EU/mg, determined by the LAL method</p>
Biological Activity	<p>Measured by its ability to chemoattract human peripheral blood lymphocytes (PBL). The ED₅₀ for this effect is typically 20-80 ng/ml corresponding to a specific activity of 12,500-50,000IU/mg.</p>
Formulation	<p>Lyophilized from a 0.2μm filtered solution in PBS.</p> <p>Reconstitute with double distilled water at a concentration of no less than 100 μg/ml with 0.1% human serum albumin (A highly purified plant-derived human serum albumin is strongly suggested to be used, Cat# HAS-1r) or bovine serum albumin as a stock.</p>
Storage	<p>Stable for 6-months from the date of shipment when kept at -20 °C or -70 °C. Upon reconstitution, it can be stored at 4 °C for at least one month or -20 °C for at least three months. Avoid repeated freeze-thaw cycles.</p>
Usage	<p>This product is produced for LABORATORY RESEARCH USE ONLY.</p>