

Human Stromal Cell Derived Factor-1 alpha (SDF-1 alpha) - Purified

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| Alternate names: | CXCL12, SDF1 alpha |
| Catalog No.: | PA1173X |
| Quantity: | 10 µg |
| Species: | Human |
| Source: | E. coli |
| Format: | State: Sterile filtered white freeze-dried powder. Purity: >98% Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel. Buffer System: Lyophilized from a concentrated (1 mg/ml) solution in water containing no additives. Endotoxin Level: Less than 0.1 ng/µg (IEU/µg) of rHuSDF-1. Dimers: < 1% Reconstitution: It is recommended to reconstitute the lyophilized rHuSDF-1 alpha in sterile 18 MΩ-cm H ₂ O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. |
| Description: | Recombinant Human SDF-1 produced in E. coli is a non-glycosylated polypeptide chain containing 68 amino acids and having a molecular mass of 8008 Dalton. The rHuSDF-1α is purified by proprietary chromatographic techniques. AA Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Lys-Pro-Val-Ser-Leu. Biological Activity: SDF-1α is fully biologically active when compared to standard. The specific activity as determined by its ability to chemoattract human peripheral T cells activated with PHA and IL-2 using a concentration of 20-80 ng/ml. Molecular weight: 8 kDa |
| Add. Information: | Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 1.06 as the extinction coefficient for a 0.1% (1 mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of SDF-1 as a Reference Standard. |

Storage:

Lyophilized rHuSDF-1 α although stable at room temperature for 3 weeks, should be stored desiccated below -18°C.
Upon reconstitution rHuSDF-1 α 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). Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. The chemokine SDF-1/CXCL12 modulates the firing pattern of vasopressin neurons and counteracts induced vasopressin release through CXCR4.
Proc Natl Acad Sci U S A 2006 May 23;103(21):8221-6
2. Cytokine-mediated deployment of SDF-1 induces revascularization through recruitment of CXCR4+ hemangiocytes. Nat Med 2006 May;12(5):557-67
3. Caveolin plays a central role in endothelial progenitor cell mobilization and homing in SDF-1-driven postischemic vasculogenesis. Circ Res 2006 May 12;98(9):1219-27
4. Localisation of SDF-1 and its receptor CXCR4 in retina and choroid of aged human eyes and in eyes with age related macular degeneration. Br J Ophthalmol 2006 Jul;90(7):906-10
5. [Effects of CCR5-delta32, CCR2-64I and SDF-1-3'A polymorphic alleles on human immunodeficiency virus 1 (HIV-1) infection in the Polish population]
Wiad Lek 2005;58(9-10):500-7
6. HSulf-2, an extracellular endoglucosamine-6-sulfatase, selectively mobilizes heparin-bound growth factors and chemokines: effects on VEGF, FGF-1, and SDF-1.
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