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SDF-1α/CXCL12

Catalog # PVGS1464

Specification

SDF-1α/CXCL12 - Product Information

Primary Accession Q4FJL5

Species
Mouse

Sequence
Lys22-Lys89

Purity
> 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ μg of protein by gel clotting method

Biological Activity
The EC₅₀ value of mouse SDF-1 α/CXCL12 on Ca²⁺ mobilization assay in CHO-K1/Gα15/mCXCR4 cells (human Gα15 and mCXCR4 stably expressed in CHO-K1 cells) is less than 1.5 μg/ml.

Expression System
CHO

Formulation **Lyophilized after extensive dialysis against PBS.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 μg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

SDF-1α/CXCL12 - Additional Information

Target Background
Stromal-Cell Derived Factor-1 alpha/ CXCL12 (SDF-1α) and SDF-1β, 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. These proteins were subsequently also cloned from a human stromal cell line as cytokines that supported the proliferation of a stromal cell-dependent pre-B-cell line. SDF-1α and SDF-1β cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1α and SDF-1β 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-1β and absent from SDF-1α. 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.

SDF-1α/CXCL12 - Protein Information

SDF-1α/CXCL12 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SDF-1α/CXCL12 - Images