

Product datasheet

Recombinant mouse SDF1 alpha protein ab51939

1 References

Overview

Product name	Recombinant mouse SDF1 alpha protein
Protein length	Full length protein

Description

Nature	Recombinant
Source	Escherichia coli
Amino Acid Sequence	
Accession	P40224
Species	Mouse
Sequence	KPVLSLYRCP CRFFESHAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNK
Amino acids	22 to 89
Additional sequence information	Mature full length for alpha isoform.

Specifications

Our [Abpromise guarantee](#) covers the use of **ab51939** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Biological activity	Determined by its ability to chemoattract human peripheral blood monocytes using a concentration range of 50-100 ng/ml.
Applications	SDS-PAGE Functional Studies
Purity	> 95 % SDS-PAGE. >99% by SDS-PAGE and HPLC analyses. Endotoxin level is <0.1 ng per µg (1EU/µg).
Form	Lyophilised

Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
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Constituent: 0.06% Acetic acid

This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitution

We recommend a quick spin followed by reconstitution in sterile distilled water to a concentration of 0.1-1.0 mg/ml. (The protein may appear as a haze or film, which is difficult to see at the bottom of the vial.)

General Info

Function

Chemoattractant active on T-lymphocytes, monocytes, but not neutrophils. Activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis. SDF-1-beta(3-72) and SDF-1-alpha(3-67) show a reduced chemotactic activity. Binding to cell surface proteoglycans seems to inhibit formation of SDF-1-alpha(3-67) and thus to preserve activity on local sites. Acts as a positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the Lyn kinase. Stimulates migration of monocytes through its receptor, CXCR4, and decreases monocyte adherence to surfaces coated with ICAM-1, a ligand for beta-2 integrins. SDF1A/CXCR4 signaling axis inhibits beta-2 integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through Lyn kinase.

Sequence similarities

Belongs to the intercrine alpha (chemokine CxC) family.

Post-translational modifications

Processed forms SDF-1-beta(3-72) and SDF-1-alpha(3-67) are produced after secretion by proteolytic cleavage of isoforms Beta and Alpha, respectively. The N-terminal processing is probably achieved by DPP4. Isoform Alpha is first cleaved at the C-terminus to yield a SDF-1-alpha(1-67) intermediate before being processed at the N-terminus. The C-terminal processing of isoform Alpha is reduced by binding to heparin and, probably, cell surface proteoglycans.

Cellular localization

Secreted.

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