

Product datasheet

Recombinant mouse SDF1 alpha protein ab51939

[2 References](#) [1 Image](#)

Description

Product name	Recombinant mouse SDF1 alpha protein
Biological activity	Determined by its ability to chemoattract human peripheral blood monocytes using a concentration range of 50-100 ng/ml.
Purity	> 99 % SDS-PAGE. >99% by SDS-PAGE and HPLC analyses. Endotoxin level is <0.1 ng per µg (1EU/µg).
Expression system	Escherichia coli
Accession	P40224
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Mouse
Sequence	KPVLSYRCP CRFFESHAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNK
Predicted molecular weight	8 kDa
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.

Applications	SDS-PAGE Functional Studies
Form	Lyophilized
Additional notes	This product is manufactured by BioVision, an Abcam company and was previously called 4388 SDF-1alpha (CXCL12), murine recombinant. 4388-10 is the same size as the 10 µg size of ab51939.

Preparation and Storage

Stability and Storage

Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

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.

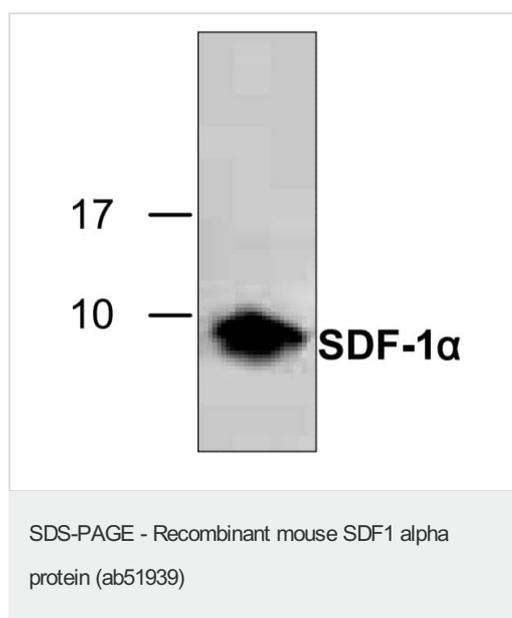
Post-translational modifications

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.

Images



Purity of ab51939 (2 µg) was analyzed by SDS-PAGE electrophoresis.

SDS-PAGE - Recombinant mouse SDF1 alpha protein (ab51939)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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