

## Product datasheet

# Synthetic Mouse SDF1 alpha protein ab175161

### Description

<b>Product name</b>	Synthetic Mouse SDF1 alpha protein	
<b>Expression system</b>	Synthetic	
<b>Accession</b>	<a href="#">P40224</a>	
<b>Protein length</b>	Protein fragment	
<b>Animal free</b>	No	
<b>Nature</b>	Synthetic	
<b>Species</b>	Mouse	
<b>Sequence</b>	KPVLSYRCPCRFFESHIANVKHLKILNTPNCALQIV ARLKNNNRQVC IDPKLKWIQEYLEKALN	
<b>Predicted molecular weight</b>	8 kDa	
<b>Amino acids</b>	22 to 88	

### Specifications

Our [Abpromise guarantee](#) covers the use of **ab175161** in the following tested applications.

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

<b>Applications</b>	HPLC
<b>Form</b>	Lyophilised

### Preparation and Storage

<b>Stability and Storage</b>	Shipped at 4°C. Store at -20°C or -80°C. Avoid freeze / thaw cycle. Information available upon request.
<b>Reconstitution</b>	It is recommended vials be centrifuged prior to opening. Water can be used to prepare stock solutions of 20 µmol.L-1. Stock solutions with up to 30% DMSO/water can also be prepared.

### General Info

<b>Function</b>	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
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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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**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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