

## Product datasheet

# Recombinant rat SDF1 alpha protein ab79959

### Overview

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<b>Product name</b>	Recombinant rat SDF1 alpha protein
<b>Protein length</b>	Full length protein

### Description

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<b>Nature</b>	Recombinant
<b>Source</b>	Escherichia coli

### Amino Acid Sequence

<b>Species</b>	Rat
<b>Sequence</b>	KPVLSLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQVA RLKSNNRQVC IDPKLKWIQE YLDKALNK

### Specifications

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Our [Abpromise guarantee](#) covers the use of **ab79959** in the following tested applications.

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

<b>Biological activity</b>	Biological Activity : Determined by its ability to chemoattract human peripheral blood monocytes using a concentration range of 50.0-100.0 ng/ml.
<b>Applications</b>	SDS-PAGE
<b>Endotoxin level</b>	< 0.100 Eu/µg
<b>Purity</b>	> 95 % SDS-PAGE. ab79959 is greater than 98% by SDS-PAGE gel and HPLC analyses. Endotoxin level is less than 0.1 ng per µg (1EU/µg).
<b>Form</b>	Lyophilised

### Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. After reconstitution store at -20°C. Avoid freeze / thaw cycles. This product is an active protein and may elicit a biological response in vivo, handle with caution.
<b>Reconstitution</b>	Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C; for up to 1 week. For extended storage, it is

recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C; to -80°C;. Working aliquots stored with a carrier protein are stable for at least 3 months at -20°C; to -80°C;. Avoid repeated freeze/thaw cycles.

## General Info

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### 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.

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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