

Product datasheet

Recombinant rat SDF1 alpha protein ab79959

Overview

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

Description

Nature	Recombinant
Source	Escherichia coli

Amino Acid Sequence

Species	Rat
Sequence	KPVLSLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQVA RLKSNNRQVC IDPKLKWIQE YLDKALNK

Specifications

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.

Biological activity	Biological Activity : Determined by its ability to chemoattract human peripheral blood monocytes using a concentration range of 50.0-100.0 ng/ml.
Applications	SDS-PAGE
Endotoxin level	< 0.100 Eu/µg
Purity	> 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).
Form	Lyophilised

Preparation and Storage

Stability and Storage	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.
Reconstitution	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

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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