

Recombinant Rat SDF-1 α /CXCL12 α

Information

Gene ID	24772
Accession #	Q9QZD1
Alternate Names	
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 7.9 kDa, a single non-glycosylated polypeptide chain containing 68 amino acids.
AA Sequence	KPVLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKSNNRQVC IDPKLKWIQE YLDKALNK
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at \leq -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human peripheral blood monocytes is in a concentration range of 50-100 ng/ml.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 μ g	100 μ g	500 μ g
Recombinant Rat SDF-1 α /CXCL12 α	10 μ g	100 μ g	500 μ g

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Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtSDF-1α/CXCL12α as determined by LAL method.

Description

CXCL12 also known as SDF-1 is belonging to the CXC chemokine family. It is encoded by the CXCL12 gene. Rat CXCL12 is expressed as two isoforms that differ only in the C-terminal tail. And both SDF-1 isoforms undergo proteolytic processing of the first two N-terminal amino acids. Contrast to SDF-1β, SDF-1α is shorter by four amino acids at the C-terminal tail. On the cell surface, the receptor for this chemokine is CXCR4 and syndecan4. CXCL12 is strongly chemotactic for T-lymphocytes, monocytes, but not neutrophils. SDF-1 is highly conserved between species, rat CXCL12α shares approximately 96% amino acid sequence identity with human CXCL12α.

Reference

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6. Askari AT, Unzek S, Popovic ZB, et al. 2003. Lancet. 362:697-703.
7. Ma Q, Jones D, Borghesani PR, et al. 1998. Proc Natl Acad Sci U S A. 95:9448-53.

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www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com