

**Recombinant Rat Stromal-Cell Derived
Factor-1 alpha/CXCL12 α
(rRtSDF-1 α /CXCL12 α)
ChemWhat Technical Data Sheet (TDS)**

Catalog Number:	241-12A
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 7.9 kDa, a single non-glycosylated polypeptide chain containing 68 amino acids.
Quantity:	2 μ g /10 μ g /1000 μ g
AA Sequence:	KPVLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKSNNRQVC IDPKLKWIQE YLDKALNK
Purity:	> 97 % by SDS-PAGE and HPLC analyses.
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.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.
Endotoxin:	Less than 1 EU/ μ g of rRtSDF-1 α /CXCL12 α as determined by LAL method.
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 $^{\circ}$ C. Further dilutions should be made in appropriate buffered solutions.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 $^{\circ}$C as supplied.● 1 month, 2 to 8 $^{\circ}$C under sterile conditions after reconstitution.● 3 months, -20 to -70 $^{\circ}$C under sterile conditions after reconstitution.
Usage:	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.

Rat Stromal-Cell Derived Factor-1 alpha/CXCL12 α

CXCL12 also known as SDF-1 is belonging to the CXC chemokine family. 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-1 β , SDF-1 α 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 CXCL12 α shares approximately 96 % amino acid sequence identity with human CXCL12 α .