

TECHNICAL DATA SHEET

# Recombinant Human CXCL12 (SDF-1 $\alpha$ )

Catalog Number: 21-8149

## RPx-Pro™ Recombinant Protein PRODUCT INFORMATION

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Recombinant Human CXCL12 (SDF-1 $\alpha$ )

### DESCRIPTION

Stromal cell derived factor 1 alpha, SDF-1 alpha, also known as C-X-C motif chemokine 12, CXCL12, is a member of the intercrine family. SDF-1 alpha is a potent chemotactic agent for peripheral blood T cells and lamina propria T cells. SDF-1 alpha has also been shown to induce migration of CD34+ stem cells.

### MOLECULAR MASS

Recombinant Human SDF-1 $\alpha$  (CXCL12) is a 8.0 kDa protein composed of 68 amino acid residues.

### AMINO ACID SEQUENCE

KPVLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNK

### SOURCE

E. Coli

### PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE gel.

### PURITY

98 %

### ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/ $\mu$ g of protein (<1EU/ $\mu$ g).

### AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

### CROSS REACTIVITY

Mouse, Rat

### BIOACTIVITY

Determined by its ability to chemoattract human peripheral T cells activated with PHA and IL-2 using a concentration of 20-80 ng/ml.

### APPLICATIONS

Bioassay

### RESEARCH AREAS

AIDS/HIV; Chemotaxis; Immune System; Inflammation ; Neurobiology; Stem Cells & Differentiation; Wound Healing

### STORAGE

-20°C

### RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information

### REFERENCES

De La Luz Sierra M, Yang F, Narazaki M, Salvucci O, Davis D, Yarchoan R, Zhang HH, Fales H, Tosato G (April 2004). "Differential processing of stromal-derived factor-1 and stromal-derived factor-1beta explains functional diversity". *Blood* 103 (7): 2452-9. Bleul CC, Fuhlbrigge RC, Casasnovas JM, Aiuti A, Springer TA (September 1996). "A highly efficacious lymphocyte chemoattractant, stromal cell-derived factor 1 (SDF-1)". *J. Exp. Med.* 184 (3): 1101-9. Askari AT, Unzek S, Popovic ZB, Goldman CK, Forudi F, Kiedrowski M, Rovner A, Ellis SG, Thomas JD, DiCorleto PE, Topol EJ, Penn MS (August 2003). "Effect of stromal-cell-derived factor 1 on stem-cell homing and tissue regeneration in ischaemic cardiomyopathy". *Lancet* 362 (9385): 697-703. Ma Q, Jones D, Borghesani PR, Segal RA, Nagasawa T, Kishimoto T, Bronson RT, Springer TA (August 1998). "Impaired B-lymphopoiesis, myelopoiesis, and derailed cerebellar neuron migration in CXCR4- and SDF-1-deficient mice". *Proc. Natl. Acad. Sci. U.S.A.* 95 (16): 9448-53.

NOTE: Please choose the appropriate format for each application. Citations are provided as a convenience to you; please consult Materials and Methods sections for additional details about the use of any product in these publications.

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