DATA SHEET

Product Name:	Chemokine CXCL-12 (SDF1-α)
Catalog #:	CK-1001
Source:	Recombinant. A DNA sequence encoding the human CXCL-12 (SDF1-α) sequence was expressed in E. coli
Molecular Mass:	7,963 Da theoretical
Protein Purity:	>95% by SDS-PAGE
Counter Ion:	20mM Tris-HCl, 100mM NaCl pH 8.0
Supplied As:	White lyophilized powder
Resuspension:	Resuspend in water at conc. of .1-1 mg/ml. Recommended to briefly centrifuge to ensure full resuspension of product.
Storage:	–20^{0}C
Activity:	Functional activity was measured through a dose-response FDCP1 cell migration assay, with and without expression of recombinant CXCR4, in parallel with native CXCL12 as a reference standard and the vehicle (media). The activity data shows an example of rPeptide's recombinant CXCL12, which has a much more robust activity than the CXCL12 standard, with the bulk of chemotaxis occurring at 1 nM. Interestingly, the chemotaxis index is nearly 3-fold higher than the CXCL12 standard, suggesting that rPeptide's recombinant protein is extremely potent. Furthermore, activity is found primarily in a single peak, suggesting that the bimodal activity observed for native CXCL12 has biological significance.
Description:	Chemokines attract immune cells to sites of inflammation.[1] In addition, chemokine signaling recruits neurons and other cells to specific sites during metastasis. The most conserved chemokine ligand/receptor signaling pathway is CXCL12/CXCR4/CXCR7.[2] Therefore, the receptor CXCL12 has been produced as a new product at rPeptide and represents chemokines in the study of neurodegenerative diseases. Since chemokines have a role in inflammatory cell attraction, the function of neuroprotection in Alzheimer's disease is an active area of investigation.
References:	1. Oppenheim, J.J, et al., (1991) Annu Rev Immunol., *9* : 617-648 2. DeVries, M.E., et al., (2006) J Immunol., *176(1)* : 401-415

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