

Stromal Cell Derived Factor 1 (SDF1) Active Protein | SDF1 active protein

Active Stromal Cell Derived Factor 1 (SDF1)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA148164	E Coli	Human	Activity Assay, Cell Culture

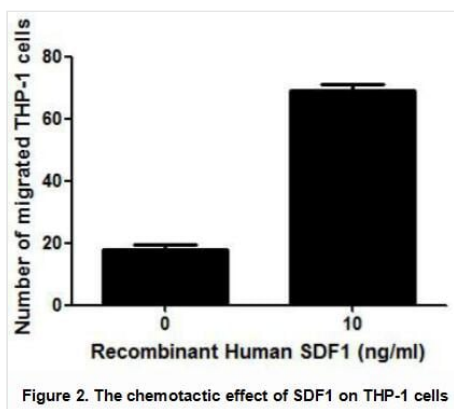
PRODUCT SYNONYMS

Stromal Cell Derived Factor 1 (SDF1); Active Stromal Cell Derived Factor 1 (SDF1); CXCL12; PBSF; P-BSF; SCYB12; SDF1-A; SDF1-B; SDF1A; SDF1B; TLSF-A; TLSF-B; TPAR1; Pre-B Cell Growth-Stimulating Factor; Chemokine C-X-C-Motif Ligand 12; SDF1 active protein

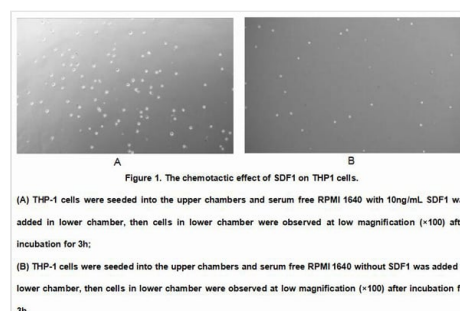
PRODUCT SPECIFICATIONS

Host	E Coli
Reactivity	Human
Purity/Purification	> 97%
Form/Format	Freeze-dried powder
Sequence Length	93
Applicable Applications for SDF1 active protein	Activity Assay, Cell Culture
Tag	N-terminal His and GST Tag
Buffer Formulation	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Fragment	Pro23~Lys89
Isoelectric Point	8.5

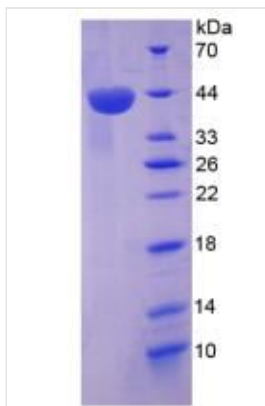
IMAGES



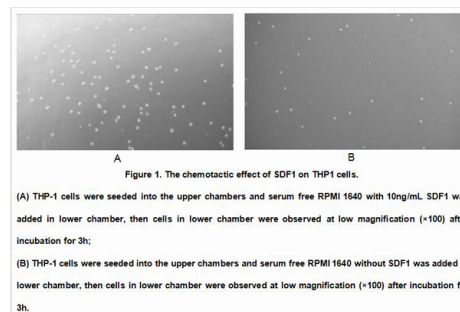
Application Data



Application Data



SDS-PAGE



Activity

SDF1 (stromal cell-derived factor 1), also known as C-X-C motif chemokine 12, is a chemokine protein that has chemotaxis active on T-lymphocytes and monocytes. It is thought that SDF1 stimulates migration of monocytes and T-lymphocytes through its receptors, CXCR4 and ACKR3; thus, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of SDF1 on the human monocytic cell line THP-1. Briefly, THP-1 cells were seeded into the upper chambers (100uL cell suspension, 106cells/mL in RPMI 1640 with 0.5% FBS) and SDF1 (10ng/mL, 30ng/mL and 60ng/mL diluted separately in serum free RPMI 1640) was added in lower chamber with a polycarbonate filter (8um pore size) used to separate the two compartments. After incubation at 37 degree C with 5% CO2 for 3h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification ($\times 100$) and the number of migrated cells were counted at high magnification ($\times 400$) randomly (five fields for each filter). Result shows SDF1 is able to induce migration of THP-1 cells. The migrated THP-1 cells in low chamber at low magnification ($\times 100$) were shown in Figure 1. Five fields of each chamber were randomly chosen, and the migrated cells were counted at high magnification ($\times 400$). Statistical results were shown in Figure 2. The optimum chemotaxis of SDF1 occurs at 10ng/mL.

ADDITIONAL INFORMATION

Product Categories/Family for SDF1 active protein	Cytokine; Tumor immunity; Infection immunity
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NCBI AND UNIPROT INFORMATION

NCBI GI #	10834988
NCBI GeneID	6387
NCBI Accession #	NP_000600.1
NCBI GenBank Nucleotide #	NM_000609.6
UniProt Accession #	P48061; Q2L985; Q2L986; Q2L988; Q5IT36; Q6ICW0; Q9H554; B2R4G0; E7EVL0; H7BYN8
Molecular Weight	Predicted Molecular Weight: 37.8kDa Accurate Molecular Weight: 40kDa
NCBI Official Full Name	stromal cell-derived factor 1 isoform beta
NCBI Official Synonym Full Names	C-X-C motif chemokine ligand 12
NCBI Official Symbol	CXCL12
NCBI Official Synonym Symbols	IRH; PBSF; SDF1; TLSF; TPAR1; SCYB12
NCBI Protein Information	stromal cell-derived factor 1
UniProt Protein Name	Stromal cell-derived factor 1
UniProt Gene Name	CXCL12
UniProt Synonym Gene Names	SDF1; SDF1A; SDF1B; SDF-1; hSDF-1; IRH; hIRH; PBSF

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

