

Human SDF1 protein, His and GST tag (active)

Cat. No. GTX00099-pro

Application	Functional Assay
Species	Human

Package
10 µg

APPLICATION

Application Note

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 (100 µl cell suspension, 1×10^6 cells/ml in RPMI-1640 with 0.5% FBS) and SDF1 (10 ng/ml, 30 ng/ml and 60 ng/ml diluted separately in serum free RPMI-1640) was added in lower chamber with a polycarbonate filter (8 µm pore size) used to separate the two compartments. After incubation at 37°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). The migrated THP-1 cells in low chamber at low magnification ($\times 100$) randomly, and the migrated cells were counted at high magnification ($\times 400$). SDF1 is able to induce migration of THP-1 cells, and the optimum chemotaxis of SDF1 occurs at 10 ng/ml.

Observed MW 40 kDa.

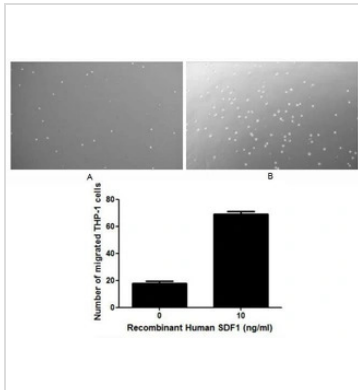
PROPERTIES

Form	Lyophilized powder
Buffer	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.
Preservative	ProClin 300
Storage	For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.
Region/Sequence	N-terminal His and GST-Tag; Pro23~Lys89 (NP_000600.1)
Expression System	E. coli
Purity	> 97%
Endotoxin	< 1 EU/µg
Conjugation	Unconjugated
Note	For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.



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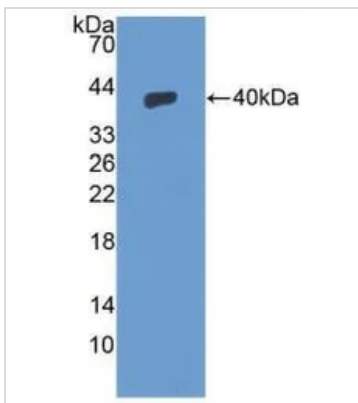
DATA IMAGES

GTX00099-pro Functional Assay Image

The chemotactic effect of GTX00099-pro Human SDF1 protein (active).

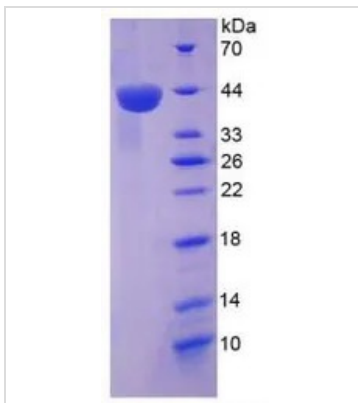
Upper: (A) THP-1 cells were seeded into the upper chambers and serum free RPMI-1640 without SDF1 was added in lower chamber, then cells in lower chamber were observed at low magnification ($\times 100$) after incubation for 3hrs.

(B) THP-1 cells were seeded into the upper chambers and serum free RPMI-1640 with 10 ng/ml SDF1 was added in lower chamber, then cells in lower chamber were observed at low magnification ($\times 100$) after incubation for 3hrs.

Lower: The number of migrated cells were counted at high magnification ($\times 400$) randomly (five fields for each filter).


GTX00099-pro Image

WB analysis of GTX00099-pro Human SDF1 protein (active).


GTX00099-pro Image

SDS-PAGE analysis of GTX00099-pro Human SDF1 protein (active).



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