



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at -20C  
#5712

## Human Stromal Cell-derived Factor 1 $\beta$ /CXCL12 (hSDF1 $\beta$ )

**For Research Use Only. Not for Use in Diagnostic Procedures.**

MW (kDa):	UniProt ID:	Entrez-Gene Id:
9	#P48061	6387

### Background

SDF1, also known as CXCL12 and PBSF, is an 8 kDa member of the CXC family of chemokines (1). SDF1 is highly conserved across species and the human protein differs from mouse by only one conserved amino acid substitution (2). SDF1 $\alpha$  and SDF1 $\beta$  are splice variants which are identical with regard to amino acid sequence except for an additional 4 amino acids on the carboxy terminus of SDF1 $\beta$  (3). Both SDF1 isoforms binds to the G protein-coupled receptor, CXCR4 (4). SDF1 $\beta$  is a potent lymphocyte chemoattractant (5). SDF1/CXCR4 signaling is required for B cell lymphopoiesis and myelopoiesis (6,7). While CXCR4 signaling plays a key role in breast cancer metastasis, increased SDF1 expression in breast cancer may be a prognostic indicator of overall survival (8).

### Endotoxin

Less than 0.01 ng endotoxin/1  $\mu$ g hSDF1 $\beta$ .

### Purity

>98% as determined by SDS-PAGE of 6  $\mu$ g reduced (+) and non-reduced (-) recombinant hSDF1 $\beta$ . All lots are greater than 98% pure.

### Source / Purification

Recombinant human SDF1 $\beta$  (hSDF1 $\beta$ ) Lys22-Met93 (Accession #NP\_000600) was produced in *E. coli* at Cell Signaling Technology.

### Bioactivity

The activity of hSDF1 $\beta$  was determined using an NK-92 cell migration assay. The ED<sub>50</sub> of each lot is between 0.1-0.3  $\mu$ g/ml.

### Background References

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