

Store at
-20°C

Human SCF Recombinant Protein

Cell Signaling
TECHNOLOGY®

#87318

10 µg

New 02/21

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orders@cellsignal.comEntrez-Gene ID #4254
UniProt ID #P21583

For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Stem cell factor (SCF) is produced by endothelial cells, fibroblasts, keratinocytes, gut epithelial cells, and tumor cells (1,2). SCF is critical for hematopoiesis and mast cell differentiation and has additional roles in survival and function of other cell types (1). Some tumor cell proliferation and invasiveness are promoted by SCF (3). Tumor-derived SCF appears to be involved in expansion of myeloid-derived suppressor cells that in turn limits proliferation of tumor-infiltrating T cells (4). SCF may have additional roles in the tumor microenvironment (2). SCF is either soluble or an integral membrane protein and the form is dependent on variation in splicing or proteolytic release (1). SCF binds to the receptor tyrosine kinase c-Kit and induces activation of the Akt, Erk, JNK, and p38 pathways (5,6).

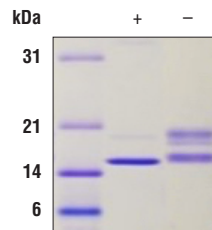
Molecular Weight: 18.6 kDa

Endotoxin: Endotoxin levels are ≤ 1 EU / 1 µg hSCF.

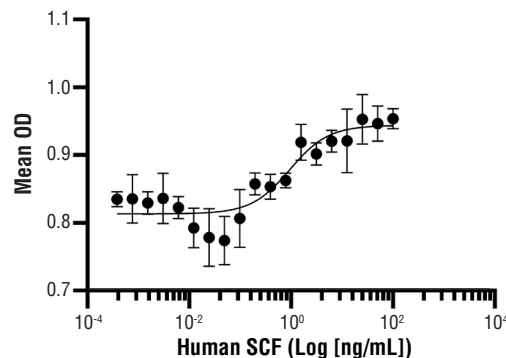
Purity: $\geq 95\%$ purity was determined by SDS-PAGE.

Source/Purification: Recombinant human SCF was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity: The bioactivity of recombinant hSCF was determined in a TF-1 cell proliferation assay. The ED_{50} of each lot is ≤ 15 ng/ml.



The purity of Human SCF Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant hSCF and staining with Coomassie Blue.



Serial dilutions of Human SCF Recombinant Protein were added to TF-1 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED_{50} .

Storage: Human SCF Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References:

- (1) Broudy, V.C. (1997) *Blood* 90, 1345-64.
- (2) Huang, B. et al. (2008) *Blood* 112, 1269-79.
- (3) Yasuda, A. et al. (2006) *Mol Cancer* 5, 46.
- (4) Pan, P.Y. et al. (2008) *Blood* 111, 219-28.
- (5) Samayawardhena, L.A. and Pallen, C.J. (2008) *J Biol Chem* 283, 29175-85.
- (6) Huang, H.M. et al. (2000) *Blood* 96, 1764-71.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.