

Recombinant Human Stem Cell Factor Biotin conjugated (rh SCF Biotin) source E. coli

Introduction: Stem cell factor is a cytokine which binds CD117(c-Kit). SCF exists in two forms, cell surface bound SCF and soluble (or free) SCF. Soluble SCF is produced by the cleavage of surface bound SCF by metalloproteases. SCF is a growth factor important for the survival, proliferation, and differentiation of hematopoietic stem cells and other hematopoietic progenitor cells. One of its roles is to change the BFU-E (burst-forming unit-erythroid) cells which are the earliest erythrocyte precursors in the erythrocytic series into the CFU-E (colony-forming unit-erythroid). In vitro and in vivo SCF can stimulate the proliferation of mature, as well as the proliferation and maturation of immature, mast cells. On purified primitive human and mouse hematopoietic precursors, SCF acts in a synergistic manner with various growth factors, such as IL-1, IL-3, IL-6, IL-7 and Epo, to induce myeloid, erythroid and lymphoid lineage colony formation.

Murine or rat soluble SCF is highly homologous to human soluble SCF (approximately 80%). Whereas both rat and mouse SCF are active on human cells, the human protein is much less active on mouse or rat cells.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: 0.2 µm filtered protein solution in PBS pH 7.2.

Solubility: It is recommended to reconstitute the lyophilized rh SCF in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh SCF Biotin although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh SCF Biotin should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: 95% (verified by SDS-PAGE / silver stain)

Endotoxicity: The endotoxin level is less than 1 EU / µg determined by LAL method.

Amino Acid Sequence: MEGICRNRVT NNVKDVTKLV ANLPKDYMIT LKYVPGMDVL PSHCWISEMV
VQLSDSLTDL LDKFSNISEG LSNYSIIDKL VNIVDDLVEC VKENSSKDLK KSFKSPEPRL FTPEEFFRIF
NRSIDAFKDF VVASETSDCV VSSTLSPEKD SRVSVTKPFM LPPVA

Biological Activity: The ED₅₀ as determined by dose-dependent stimulation of TF-1 cells is < 2 ng/ml, corresponding to a specific activity of 500,000 IU/mg.

<i>small</i>	2 µg	Cat.N°	1134B3322
<i>medium</i>	10 µg	Cat.N°	1134B3323
<i>large</i>	50 µg	Cat.N°	1134B3325

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