

SCF Mouse

Description: Stem Cell Factor Mouse Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 165 amino acids and having a molecular mass of 18309 Dalton. The SCF is purified by proprietary chromatographic techniques.

Synonyms: Kit ligand Precursor, C-kit ligand, SCF, Mast cell growth factor, MGF, SF, KL-1, Kitl, DKFZp686F2250, Hematopoietic growth factor KL, Steel factor.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence: MKEICGNPVT DNVKDITKLV ANLPNDYMIT LNYVAGMDVL
PSHCWLRDMV IQLSLSLTTL LDKFSNISEG LSNYSIIDKL GKIVDDLVL C MEENAPKNIK
ESPKRPETRS FTPEEFSIF NRSIDAFKDF MVASDTSDCV LSSTLGPEKD SRVSVTKPFM
LPPVA.

Purity: Greater than 98.0% as determined by: (a) Analysis by SEC-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

Lyophilized from a concentrated (1mg/ml) solution in water containing 0.02% NaHCO₃.

Stability:

Lyophilized KIT ligand although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution SCF 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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

It is recommended to reconstitute the lyophilized Stem Cell Factor in sterile 18M-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Introduction:

Stem cell factor / KIT ligand (SCF) is a cytokine which binds CD117(c-Kit). SCF is also known as "steel factor" or "c-kit ligand". 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).

Biological Activity:

The ED₅₀ as determined by the dose-dependant stimulation of Human TF-1 cell line is < 10 ng/ml, corresponding to a Specific Activity of 1x10⁵ IU/mg.

References:

1. Title: enhanced self-renewal of hematopoietic stem/progenitor cells mediated by the stem cell gene

sall4. Publication: Link: <http://www.biomedcentral.com/content/pdf/1756-8722-4-38.pdf>. Title: Contribution of an Aged Microenvironment to Aging-Associated Myeloproliferative Disease. Publication: Vas V, Wandhoff C, Drr K, Niebel A, Geiger H (2012) Contribution of an Aged Microenvironment to Aging-Associated Myeloproliferative Disease. PLoS ONE 7(2): e31523. doi:10.1371/journal.pone.0031523 Link: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0031523>

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