# Technical Data Sheet

## Recombinant Murine Stem Cell Factor (rMuSCF )

*Murine Stem Cell Factor*

C-kit ligand, the recently identified ligand for the kit tyrosine kinase receptor, is mapped to the mouse S1 locus. This pleiotropic cytokine, alternately known as stem cell factor (SCF), mast cell growth factor (MGF) and steel-factor (SLF), plays essential roles in gametogenesis, melanogenesis and early stages of hematopoiesis. 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. The finding that SCF is also expressed in the nervous system suggests a possible role for SCF in the development of the nervous system.

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| Catalog Number: | RC233-12 |
| Source: | *Escherichia coli.* |
| Molecular Weight: | Approximately 18.4 kDa, a single non-glycosylated polypeptide chain containing 165 amino acids. |
| Quantity: | 2μg/10μg/1000μg |
| Purity: | >97% by SDS-PAGE and HPLC analyses. |
| Biological Activity: | Fully biologically active when compared to standard. The ED50 determined by a cell proliferation assay using human TF-1 cells is less than 10 ng/ml, corresponding to a specific activity of $>$ 1.0 ×$10^5$ IU/mg. |
| Physical Appearance: | Sterile Filtered White lyophilized (freeze-dried) powder. |
| Formulation: | Lyophilized from a 0.2μm filtered concentrated solution in PBS, pH 7.4. |
| AA Sequence: | MEGICRNRVT NNVKDVTKLV ANLPKDYMIT LKYVPGMDVL PSHCWISEMV VQLSDSLTD LDKFSNISEG LSNYSIIDKL VNIVDDLVEC VKENSSKDLK KSFKSPEPRL FTPEEFFRIF NRSIDAFKDF VVASETSDCV VSSTLSPEKD SRVSVTKPFM LPPVA |
| Endotoxin: | Less than 1EU/μg of rMuSCF as determined by LAL method. |
| Reconstitution: | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions. |
| Storage: | This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long |

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| | term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles. |
| Usage: | This material is offered by Bio Basic Inc. for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. |

20 Konrad Cres, Markham Ontario L3R 8T4 Canada
Tel: (905) 474 4493, (800) 313 7224 Fax: (905) 474 5794
Email: order@biobasic.com Web: www.biobasic.com