

Recombinant Canine Stem Cell Factor

Information

Gene ID	403507
Accession #	Q06220
Alternate Names	Hematopoietic Growth Factor KL, MGF
Source	Escherichia coli.
M.Wt	Approximately 18.4 kDa, a single non-glycosylated polypeptide chain containing 165 amino acids.
AA Sequence	KGICGKRVT DDKVDVTKLVA NLPKDYKIAL KYVPGMDVLP SHCWISVMVE QLSVSLTDLL DKFSNISEGL SNYSIIDKLV KIVDDLVECT EGYSFENVKK APKSPELRLF TPEEFFRIFN RSIDAFKDL TVASKSSECV VSSTLSPDKD SRVSVTKPFM LPPVA
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 2 × PBS, pH 7.4.
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.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using human TF-1 cells is less than 2.0 ng/ml, corresponding to a specific activity of > 5.0 × 10 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10µg	100µg	500µg
Recombinant Canine Stem Cell Factor	10µg	100µg	500µg

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- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 96 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rCaSCF as determined by LAL method.

Description

Stem Cell Factor (SCF) which binds to the c-Kit receptor is produced by fibroblasts and endothelial cells. The soluble and transmembrane forms of the protein are formed by alternative splicing of the same RNA transcript and the presence of both soluble and transmembrane SCF is required for normal hematopoietic function. SCF plays an important role in hematopoiesis, spermatogenesis and melanogenesis and it promotes mast cell adhesion, migration, proliferation, and survival. Soluble canine SCF shares 88 %, 93 %, 86 %, 83 %, 76 %, 76 %, 86 % and 88 % a.a. sequence identity with porcine, feline, bovine, human, mouse, rat, goat and equine SCF, respectively. Cells known to express SCF include endothelial cells, fibroblasts and keratinocytes .

Reference

1. Ronnstrand L. 2004. Cell Mol Life Sci. 61:2535-48
2. Anderson DM, Williams DE, Tushinski R, et al. 1991. Cell Growth Differ. 2:373-8
3. Brannan CI, Lyman SD, Williams DE, et al. 1991. Proc Natl Acad Sci U S A. 88:4671-4
4. Okayama Y, Kawakami T. 2006. Immunol Res. 34:97-115.

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