

Recombinant Rat Kitlg protein

Cat. No. Kitlg-584R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Kitlg protein was expressed in Escherichia coli.
Species	Rat
Source	E.coli
ProteinLength	165
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. In addition, it also promotes mast cell adhesion, migration, proliferation, and survival 3. Rat SCF shares 75 % 90 % a.a. sequence identity with canine, feline, mouse, and human SCF. Furthermore, rat SCF is active on mouse and human cells, but human SCF is only weakly active on mouse cells.
Form	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using murine MC/9-2 mast cells is less than 5 ng/ml, corresponding to a specific activity of $> 2.0 \times 10^5$ IU/mg.
Molecular Mass	Approximately 18.5 kDa, a single non-glycosylated polypeptide chain containing 165

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	amino acids.
AA Sequence	MQEICRNPVTDNVKDITKLVANLPNDYMITLNYVAGMDVLP SHCWLRDMVTHLSVSL TTLLDKFSNISEGLSNYSIIDKLGKIVDDL VACMEENAPKNVKESLKKPETRNFTPEEF FSIFNRSIDAFKDFMVASDTSDCVLSSTLGPEKDSRVSVTKPFMLPPVA
Endotoxin	Less than 1 EU/g of rRtSCF as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
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 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	Kitlg
Official Symbol	Kitlg
Synonyms	Hematopoietic growth factor KLMGF
Gene ID	60427

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mRNA Refseq	NM_021843
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Protein Refseq	NP_068615
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UniProt ID	P21581
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