

Active GMP Recombinant Human KITLG protein

Cat. No. KITLG-4339HG **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human KITLG was produced in E. coli using non-animal reagents in an animal-free facility under cGMP guidelines.
Species	Human
Source	E.coli
Description	Stem Cell Factor (SCF) that 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. It also promotes mast cell adhesion, migration, proliferation, and survival. Human SCF shares 79 % - 87 % a.a. sequence identity with canine, feline, mouse, and rat SCF. Furthermore, human SCF is weakly active on mouse cells.
Form	Lyophilized from a 0.2 µm 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 human TF-1 cells is less than 2 ng/ml, corresponding to a specific activity of $> 5.0 \times 10^5$ IU/mg.
Molecular Mass	Approximately 18.5 kDa, a single non-glycosylated polypeptide chain containing 164 amino acids.

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AA Sequence	EGICRNRVTNNVKDVTCLVANLPKDYMITLKYVPGMDVLPSHCWISEMVVQLSDSLT DLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSSKDLKKSFKSPEPRLFTPEEFF RIFNRSIDAFKDFVVASETSDCVVSSTLSPEKDSRVSVTKPFMLPPVA
Endotoxin	Less than 1 EU/μg of rHuSCF as determined by LAL method.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Storage	This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably des centigradecated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 centigrade to -70 centigrade. Avoid repeated freeze/thaw centigrade centigradeles.
Reconstitution	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.
Quality Statement	Our GMP proteins are produced according to relevant sections of the following documents: WHO TRS, No. 822, 1992 Annex 1, Good Manufacturing Practices for Biological Products; USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and USP Chapter 92, Growth Factors and Cytokines Used in Cell Therapy Manufacturing.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

GENE INFORMATION

Gene Name **KITLG KIT ligand [Homo sapiens]**

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Official Symbol	KITLG
Synonyms	KITLG; KIT ligand; MGF; kit ligand; familial progressive hyperpigmentation 2; FPH2; Kitl; KL 1; mast cell growth factor; SCF; SF; steel factor; stem cell factor; c-Kit ligand; KL-1; SHEP7; kit-ligand; DKFZp686F2250;
Gene ID	4254
mRNA Refseq	NM_000899
Protein Refseq	NP_000890
MIM	184745
UniProt ID	P21583

