

**Synonym**

KITLG,FPH2,KL-1,Kitl,MGF,SCF,SF,SHEP7,KL

**Source**

ActiveMax® Human SCF, Tag Free (SCF-H4212) is expressed from human 293 cells (HEK293). It contains AA Glu 26 - His 214 (Accession # AAH69797).

Predicted N-terminus: Glu 26

**Molecular Characterization**

SCF(Glu 26 - His 214)  
AAH69797

This protein carries no "tag".

The protein has a calculated MW of 22.1 kDa. The protein migrates as 32-45 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

&gt;98% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

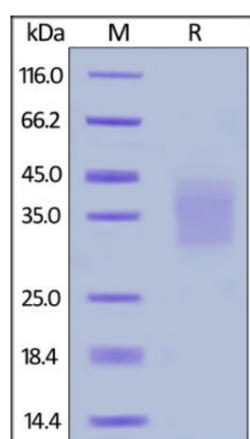
*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.***Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

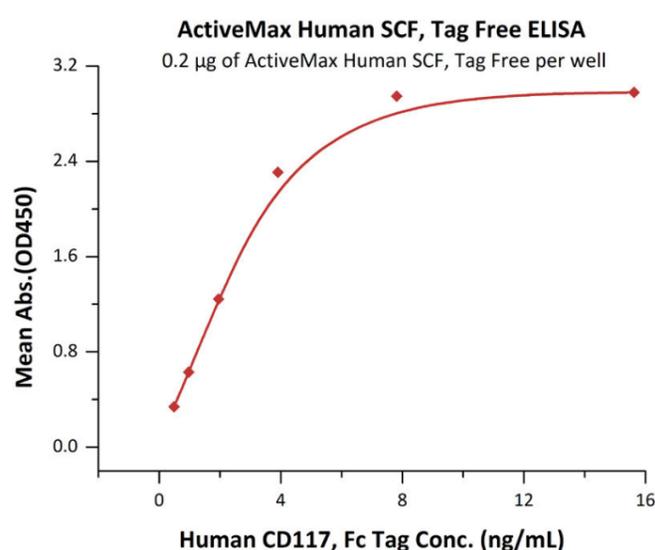
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

ActiveMax® Human SCF, Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 98%.

**Bioactivity-ELISA**



Immobilized ActiveMax® Human SCF, Tag Free (Cat. No. [SCF-H4212](#)) at 2 µg/mL (100 µL/well) can bind Human CD117, Fc Tag (Cat. No. [CD7-H5255](#)) with a linear range of 0.5-4 ng/mL (QC tested).

## Background

Stem Cell Factor is also known as SCF, kit-ligand, KL, steel factor, KITLG, FPH2, KL-1, Kitl, MGF, SCF, SF, or SHEP7, and is a cytokine that binds to the c-Kit receptor (CD117). SCF can exist both as a transmembrane protein and a soluble protein. This cytokine plays an important role in hematopoiesis (formation of blood cells), spermatogenesis, and melanogenesis. The soluble and transmembrane forms of the protein are formed by alternative splicing of the same RNA transcript. Soluble and transmembrane SCF is produced by fibroblasts and endothelial cells. Soluble SCF has a molecular weight of 18,5 KDa and forms a dimer. SCF plays an important role in the hematopoiesis during embryonic development. Sites where hematopoiesis takes place, such as the fetal liver and bone marrow, all express SCF. During development, the presence of the SCF also plays an important role in the localization of melanocytes, cells that produce melanin and control pigmentation. SCF plays a role in the regulation of HSCs in the stem cell niche in the bone marrow. SCF may be used along with other cytokines to culture HSCs and hematopoietic progenitors. The expansion of these cells ex-vivo (outside the body) would allow advances in bone-marrow transplantation, in which HSCs are transferred to a patient to re-establish blood formation.

## References

- (1) [Anderson DM, et al., 1991, Cell Growth Differ. 2 \(8\): 373–8.](#)
- (2) [Broudy VC, 1997, Blood 90 \(4\): 1345–64.](#)
- (3) [Blouin R, Bernstein A, 1993, In Freedman MH, Feig SA. Boca Raton: CRC Press.](#)
- (4) [Kent D, et al., 2008, Clin. Cancer Res. 14 \(7\): 1926–30.](#)

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.