

**Synonym**

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

Source

Human SCF, His Tag(SCF-H52H3) is expressed from human 293 cells (HEK293). It contains AA Glu 26 - Ala 189 (Accession # [P21583-1](#)).

Predicted N-terminus: Glu 26

Molecular Characterization

SCF(Glu 26 - Ala 189)
P21583-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 20.3 kDa. The protein migrates as 30-35 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μ g by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

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.

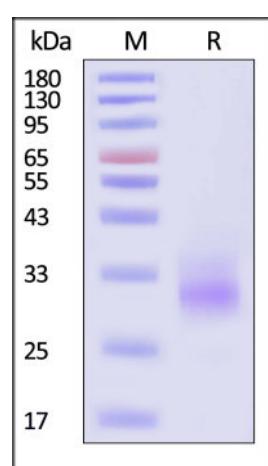
Storage

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

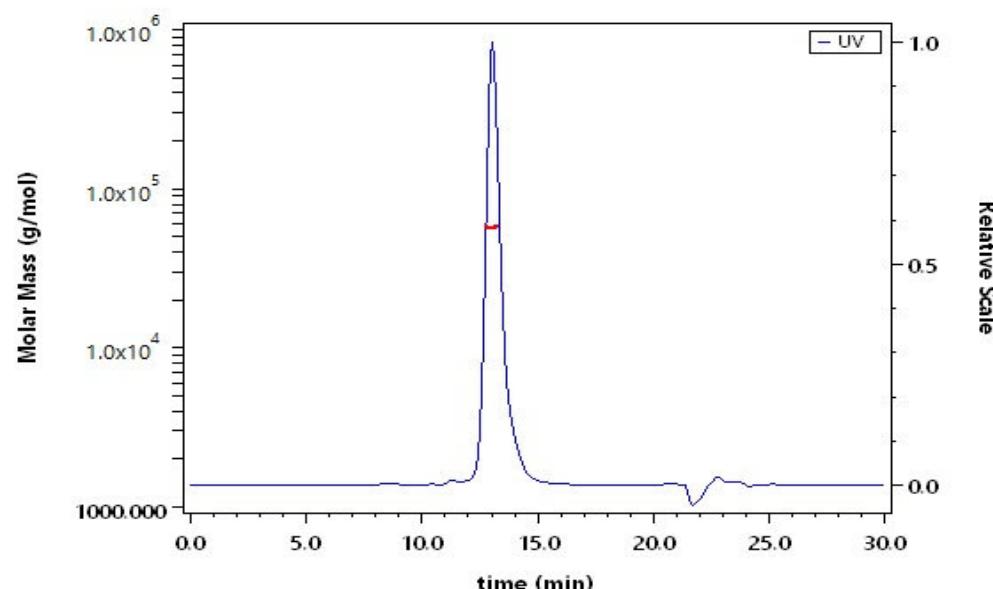
Please avoid repeated freeze-thaw cycles.

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

Human SCF, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS

The purity of Human SCF, His Tag (Cat. No. SCF-H52H3) is more than 85% and the molecular weight of this protein is around 50-60 kDa verified by SEC-MALS.

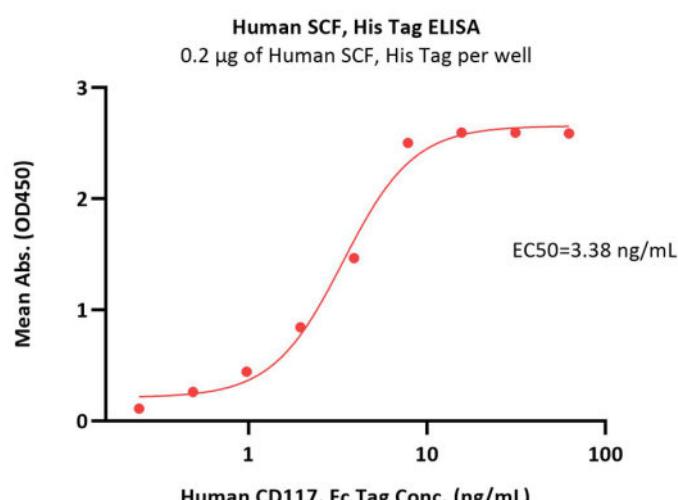
[Report](#)

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Immobilized Human SCF, His Tag (Cat. No. SCF-H52H3) at 2 µg/mL (100 µL/well) can bind Human CD117, Fc Tag (Cat. No. CD7-H5255) with a linear range of 0.5-8 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 R 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.

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