Product Information

- Name: SCF Protein, Human (HEK293)
- Accession Number: P21583-1 (E26-A189)
- Predicted Molecular Weight: 18.5 kDa
- Apparent Molecular Weight: Approximately 27-33 kDa, based on SDS-PAGE under reducing conditions, due to glycosylation.
- Appearance: Sterile powder (lyophilized).
- Source/Expression System: Recombinant human-derived protein, expressed in HEK293 cells.
- Tag: Tag Free.
- Purity: ≥ 95%, as determined by reducing SDS-PAGE.
- Endotoxin Level: <1 EU/μg, determined by LAL method.
- Glycosylation: Yes.

Biological Activity

- Target and Mechanism: SCF is a ligand for the KIT receptor-type protein tyrosine kinase. It regulates various cellular processes including survival, proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration, and melanogenesis. Binding to KIT activates multiple signaling pathways.

- Binding Activity: Measured by its binding ability in a functional ELISA. Immobilized Human SCF at 2 μg/mL (100 μL/well) can bind Biotinylated Human CD117, His, Avitag with a linear range of 0.02-0.3 μg/mL.
- Cell-Based Assay: Stimulates proliferation of Mo7e cells. The specific activity is > 5.0×10^5 IU/mg, calibrated against the human SCF WHO International Standard.

Handling and Storage

- Composition: Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4, with 11% trehalose as a protectant.
- Reconstitution: It is recommended to reconstitute to a concentration of ≥ 100 μg/mL in ddH_2O.
- For long-term storage, it is recommended to add a carrier protein (e.g., 0.1% BSA, 5% HSA, 10% FBS, or 5% Trehalose).
- Centrifuge the vial briefly before opening to collect all lyophilized powder at the bottom.
- After reconstitution, it is stable at 4°C for 1 week or at -20°C for longer periods (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. Avoid repeated freeze-thaw cycles.
- Storage: Lyophilized powder: Stored at -20°C for up to 2 years from the date of receipt.