RECOMBINANT HUMAN SCF ACF

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RECOMBINANT HUMAN SCF ACF

Catalog No. 95115

INTENDED USE

Recombinant human SCF is a carrier-free, animal component-free bioactive recombinant growth factor intended for use in cell culture applications. SCF is involved in a variety of cell activities such as survival, proliferation, migration and differentiation.

PRODUCT DESCRIPTION

1. **Synonyms**
   c-Kit Ligand, KL, Steel Factor, MGF.

2. **Accession Number**
   P21583

3. **Background**
   SCF is produced by fibroblasts and endothelial cells. SCF binds to and activates the receptor tyrosine kinase c-Kit. Activation of c-Kit receptor is thought to play a role in cell survival, migration and proliferation in different cell types. Additionally, SCF is critical for promoting proliferation, survival and differentiation of hematopoietic progenitor cells as well as melanocytes and germ cells. SCF/c-Kit signaling is also essential for embryonic hematopoiesis (1-4). Although murine and rat SCF are active on human cells, human SCF shows little or no activity on rat and murine cells. Recombinant human SCF is a non-glycosylated protein, containing 165 amino acids, with a molecular weight of 18.4 kDa.

4. **Specifications**
   Formulation
   Recombinant human SCF is lyophilized with no additives.

   Protein content and Purity
   ≥95% determined by HPLC, reducing and non reducing SDS-PAGE analysis, UV spectroscopy.

   Bioactivity
   ED_{50} is determined by a dose dependent proliferation of human TF1 cells (5). The ED_{50} is typically less than 10 ng/mL.

   Quality and Grade
   Carrier-free. Animal component-free.

SHIPPING

This product is shipped at ambient temperature. Immediately upon receipt, store at the recommended temperature below.

STORAGE INSTRUCTIONS AND STABILITY

Upon receipt, store the lyophilized protein at or below -10°C in a manual defrost freezer for up to 12 months from date of receipt. Unopened vials are stable for one year from the date of receipt when stored as recommended. Reconstituted material should be apportioned in working volumes and stored at or below -10°C in manual defrost freezer. Reconstituted material is stable for 4-6 weeks when stored at or below -10°C and for 3-12 months at -80°C. Stability can be increased by adding at least 0.1% of carrier protein.

PRECAUTIONS AND WARNINGS

This product is for research or further manufacturing use only. It is not for use in diagnostic procedures. The safety and efficacy of this product in diagnostic or other clinical procedures has not been established.

DIRECTIONS FOR USE

1. **Reconstitution**
   Centrifuge vials before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water, which can be further diluted into other aqueous solutions.

2. **Optimum concentration**
   The optimum concentration varies depending on cell type and culture conditions. Working concentration should be determined for each specific application.

REFERENCES

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