

Technical Data Sheet

Recombinant human SCF protein



Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioXcell.com/terms-and-conditions>.

Lot Specific Information

Lot Number: Lot Specific*

Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Website Link: <https://bioXcell.com/recombinant-human-scf-protein-rp023>

Product Information

Catalog Number:	RP023
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	18.5 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human SCF protein (stem cell factor, also known as kit-ligand or mast cell growth factor) is a pivotal regulator of stem cell function across embryonic development, tissue regeneration and cancer biology. SCF signals through its receptor c-kit, a transmembrane tyrosine kinase expressed on hematopoietic stem cells, neural crest-derived cells, melanocytes and germ cells, activating the Ras/MAPK, PI3K/Akt and JAK/STAT pathways to control cell proliferation, survival, migration and differentiation; proteolytic cleavage also releases a soluble form that retains c-kit binding and paracrine/autocrine activity. In hematopoiesis, SCF is critical for the maintenance and expansion of hematopoietic stem cells and their differentiation into red blood cells, mast cells and platelets, and during embryogenesis it drives neural crest cell proliferation, migration and survival. Because aberrant SCF/c-kit signaling is implicated in gastrointestinal stromal tumors (GISTs), acute myeloid leukemia and melanoma, recombinant SCF is a valuable reagent for stem cell, developmental and cancer research. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. Species reactivity: human. Species similarity: mouse - 79%, rat - 79%, bovine - 82%, porcine - 83%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioXcell.com/faqs>.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

Bio X Cell, LLC

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.

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