Technical Data Sheet

Recombinant mouse SCF protein

bioxcell.com

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 Information

Catalog Number:	**RP080**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Maintenance and differentiation of hematopoietic stem cells Differentiation of induced pluripotent stem cells to microglia
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:	18.4 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant mouse SCF protein (stem cell factor), also known as kit ligand or mast cell growth factor, is a pivotal regulator of stem cell function that signals through c-kit, a transmembrane tyrosine kinase receptor expressed on hematopoietic stem cells, neural crest-derived cells, melanocytes and germ cells, activating the Ras/MAPK, PI3K/Akt and JAK/STAT pathways that control proliferation, survival, migration and differentiation. SCF can be proteolytically cleaved near the membrane to release a soluble form that retains c-kit binding and acts as a paracrine or autocrine factor. In hematopoiesis, SCF is critical for the maintenance, expansion and self-renewal of hematopoietic stem cells (HSCs) in the bone marrow and for their differentiation into red blood cells, mast cells and platelets, and during embryogenesis it supports the proliferation, migration and survival of neural crest cells that give rise to neurons, glia, melanocytes and smooth muscle cells. Aberrant SCF/c-kit signaling contributes to gastrointestinal stromal tumors (GISTs), acute myeloid leukemia (AML) and melanoma, making recombinant SCF a key reagent for hematopoietic stem cell, developmental biology 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: mouse. Species similarity: human - 95%, rat - 97%, bovine - 87%, porcine - 88%.

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
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.
Not for resale.
Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © Bio X Cell, LLC