

Recombinant human SCF protein (Qk078-CTG)



Type: Cell Therapy Grade

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000

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Product Information

Stem Cell Factor (SCF) is a critical factor in the maintenance and expansion of [hematopoietic stem cells](#) (HSCs) in the bone marrow microenvironment. Key myeloid progenitor differentiation factor for a variety of myeloid cells such as megakaryocytes, basophils, neutrophils, and monocytes, Stem Cell Factor is also a primary growth and activation factor for mast cells and eosinophils.

Recombinant SCF is a highly pure 18.5 kDa monomer, [animal origin-free](#) (AOF) and carrier-protein-free (CF). Qkine has optimized the SCF manufacture process to produce a highly bioactive protein with excellent lot-to-lot consistency for enhanced reproducibility.

Qkine [cell therapy grade](#) high purity animal origin-free proteins are manufactured as GMP grade equivalents in an ISO 9001:2015-certified facility, under ISO 20399:2022 standards with GMP compliance, defined quality criteria and documentation.

This product is available to order now and will be in stock soon, please contact us for the estimated lead time

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Alternative protein names

Mast cell growth factor (MGF), Stem cell growth factor (SCF), C-kit ligand, Qk78

Molecular weight

18.5 kDa (monomer)

Protein Uniprot number

High purity human SCF protein (Uniprot number: P21583)

Species reactivity

- human
- species similarity:
- mouse - 79%
- rat -79%
- bovine - 82%
- porcine - 83%

Product Information

- Certified animal origin-free (AOF)
- Cell and gene therapy grade
- Manufactured in our ISO 9001:2015 facility in Cambridge, UK
- Lot-to-lot consistency in bioactivity
- Full traceability and documentation
- Carrier protein-free, tag free
- Expressed in *E. coli*
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in sterile-filtered water at >50 µg/ml

Featured applications

- Immune cell therapy expansion
- Neural stem cell (NSC) therapy
- Regenerative stem cell therapy

Further quality assays

- Mass spectrometry: single species with expected mass
- Purity >98%, by SDS-PAGE quantitative densitometry
- Recovery from stock vial: >95%
- Sterility tested and mycoplasma negative

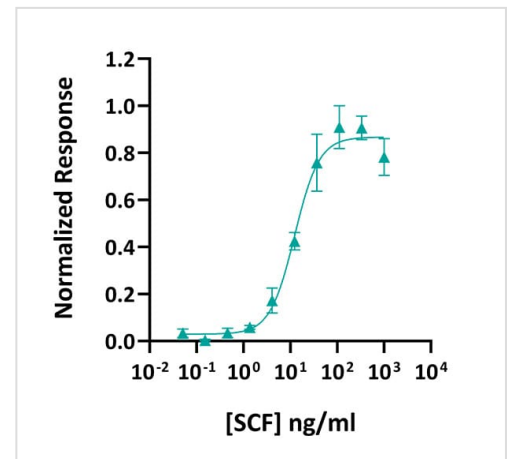
- Endotoxin: <math><0.05\text{ EU}/\mu\text{g}</math> protein
- Residual host cell protein <math><10\text{ ng}/\mu\text{g}</math>
- Residual host cell DNA <math><10\text{ ng}/\mu\text{g}</math>
- N-terminal sequence analysis

Scientific Information

Bioactivity

Recombinant SCF activity was determined using a Promega serum response element luciferase reporter assay in HEK293T cells co-transfected with c-Kit. Data from Qk078 lot #204804. EC50 = 12.4 ng/ml (0.67 nM).

The specific activity of recombinant cell therapy grade SCF is $>8.0 \times 10^5$ IU/mg, which is calibrated against the human SCF WHO standard (NIBSC code: 91/682).



Purity

Recombinant SCF migrates at approximately 18 kDa (monomer) in reduced (R) and at approximately 15 kD in non-reduced (NR) conditions. No contaminating protein bands are present. The purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk078 lot #204621.



Original product page: <https://ryan.calliope-alpha.ts.net/product/recombinant-human-scf-protein-qk078-ctg/>

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