

Mouse SCF ELISA Kit ab197750

Recombinant SimpleStep ELISA

[6 Images](#)

Overview

Product name Mouse SCF ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall	8			2.89%

Inter-assay

Sample	n	Mean	SD	CV%
Overall	3			5.09%

Sample type Cell culture supernatant, Serum, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 1.11 pg/ml

Range 15.63 pg/ml - 1000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	101.6	100.9% - 102.4%
Cell culture media	101.5	99.8% - 104%
Cit plasma	103.5	102.5% - 105.5%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Mouse

Does not react with: Sheep, Goat, Pig

Product overview

Mouse SCF ELISA Kit (ab197750) is a single-wash 90 min sandwich ELISA designed for the

quantitative measurement of SCF protein in cell culture supernatant, cit plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse SCF with 1.11 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes

Stem Cell Factor (SCF), also known as c-kit ligand, mast cell growth factor (MGF), and Steel Factor, is a hematopoietic growth factor that exerts its activity at the early stages of hematopoiesis. Mutations in either SCF or its receptor, c-kit tyrosine kinase receptor, have the same complex phenotype that affects hematopoiesis, gametogenesis, and melanogenesis. SCF stimulates the proliferation of mast cells and is able to augment the proliferation of both Myeloid and lymphoid hematopoietic progenitors in bone marrow culture. Additionally, fibroblasts, bone marrow stromal cells, macrophages, astroglia, and neurons widely express mouse SCF.

Mouse SCF cDNA encodes a 248 amino acid (aa) residue. This residue is a type I transmembrane protein containing a 25 aa signal peptide, a 189 aa extracellular region, a 23 aa TM domain, and a 36 aa cytoplasmic tail. Through alternative splicing, two isoforms of cell-associated SCF exist: KL-1 and KL-2. These isoforms differ by the presence or absence of exon 6, which encodes a proteolytic cleavage site. The 164-165 aa secreted soluble form of SCF is generated by proteolytic cleavage from KL-1. Human SCF and rat SCF are 80% and 95% identical to mouse SCF, respectively.

The standard is affinity purified.

Platform

Microplate (12 x 8 well strips)

Properties

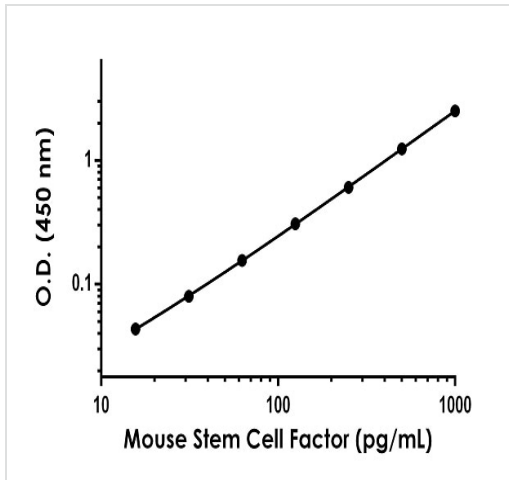
Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse Stem Cell Factor Capture Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Mouse Stem Cell Factor Detector Antibody (lyophilized)	2 vials

Components	1 x 96 tests
Mouse Stem Cell Factor Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent 50BS	1 x 20ml
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

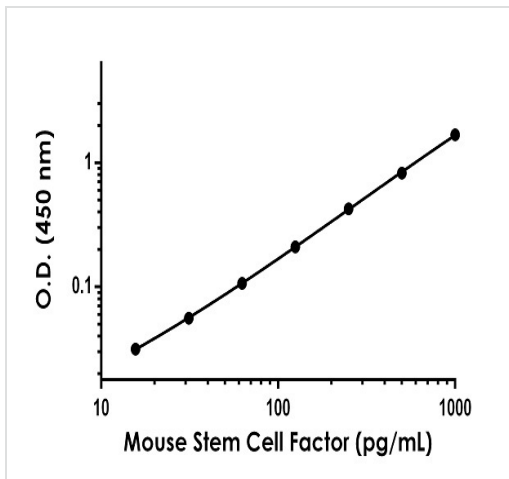
Function	Ligand for the receptor-type protein-tyrosine kinase KIT. Plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. KITLG/SCF binding can activate several signaling pathways. Promotes phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and subsequent activation of the kinase AKT1. KITLG/SCF and KIT also transmit signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. KITLG/SCF and KIT promote activation of STAT family members STAT1, STAT3 and STAT5. KITLG/SCF and KIT promote activation of PLCG1, leading to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. KITLG/SCF acts synergistically with other cytokines, probably interleukins.
Involvement in disease	Hyperpigmentation with or without hypopigmentation, familial progressive Deafness, congenital, unilateral or asymmetric
Sequence similarities	Belongs to the SCF family.
Developmental stage	Acts in the early stages of hematopoiesis.
Post-translational modifications	A soluble form (sKITLG) is produced by proteolytic processing of isoform 1 in the extracellular domain. Found in two differentially glycosylated forms, LMW-SCF and HMW-SCF. LMW-SCF is fully N-glycosylated at Asn-145, partially N-glycosylated at Asn-90, O-glycosylated at Ser-167, Thr-168 and Thr-180, and not glycosylated at Asn-97 or Asn-118. HMW-SCF is N-glycosylated at Asn-118, Asn-90 and Asn-145, O-glycosylated at Ser-167, Thr-168 and Thr-180, and not glycosylated at Asn-97. A soluble form exists as a cleavage product of the extracellular domain.
Cellular localization	Secreted; Cell membrane and Cytoplasm. Cytoplasm, cytoskeleton. Cell membrane. Cell projection, lamellipodium. Cell projection, filopodium.

Images



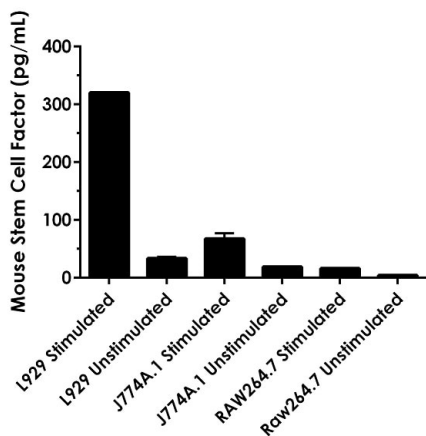
Background-subtracted data values (mean +/- SD) are graphed.

Example of Stem Cell Factor Mouse standard curve in Sample Diluent NS.



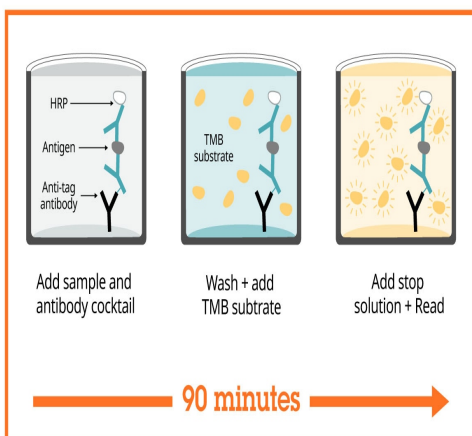
Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse Stem Cell Factor standard curve in Sample Diluent 50BS.



Stem Cell Factor mouse expression is shown for cultured media from three mouse cell lines

L929, J774A.1 and RAW264.7 cells were cultured in cell culture media with 10% fetal calf serum or horse serum, 2mM L-glutamine and 100 µg/mL Kanamycin. L929 and J774A.1 cells were treated for 72 hours in the presence and absence of 1.5% PHA and 10 ng/mL of PMA. RAW264.7 cells were starved for 24 hours and treated in the presence and absence of 5 µg/mL of LPS. Samples were loaded on the plate undiluted and the concentrations of Stem Cell Factor were interpolated from a calibration curve diluted in Sample Diluent NS. The mean Stem Cell Factor concentration was determined to be 319.5 pg/mL in stimulated L929 cells, 32.7 pg/mL in unstimulated L929 cells, 66.3 pg/mL in stimulated J774A.1 cells, 18.2 pg/mL in unstimulated J774A.1 cells, 15.8 pg/mL in stimulated RAW264.7 cells, and 3.5 pg/mL in unstimulated RAW264.7 cells.



SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Sandwich ELISA - Mouse SCF ELISA Kit (ab197750)

Powered by
recombinant antibodies



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Sandwich ELISA - Mouse SCF ELISA Kit
(ab197750)

To learn more about the advantages of recombinant antibodies see [here](#).

Get more done with SimpleStep ELISA



Easy to use
Single-wash 90-minute protocol



Flexible
Matched antibody pairs available



Precision antibodies
High sensitivity, specificity and reproducibility



Scalable
Now in 10-pack and 384-well formats

Sandwich ELISA - Mouse SCF ELISA Kit
(ab197750)

To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

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