

## Recombinant Mouse SCF

Catalog No.: RP0076

### Basic Information

#### Information

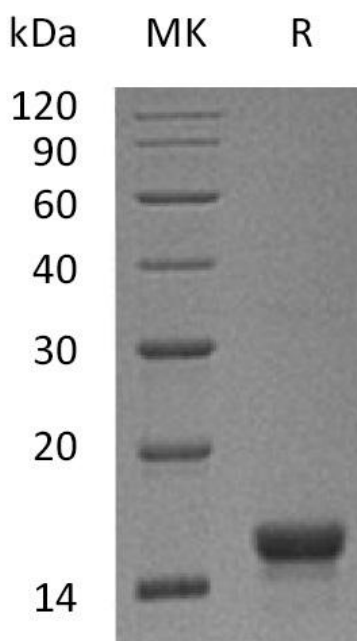
Source	<i>E.coli</i>
Description	Recombinant Mouse Stem Cell Factor is produced by our E.coli expression system and the target gene encoding Lys26-Ala189 is expressed.
Accession	P20826
Known As	Kit ligand; Hematopoietic growth factor KL; Mast cell growth factor; MGF; Steel factor; Stem cell factor; SCF
Predicted Mol Mass	18.4 KDa
Apparent Mol Mass	16 KDa, reducing conditions

#### Properties

Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Storage	Lyophilized protein should be stored at $\leq -20^{\circ}\text{C}$ , stable for one year after receipt. Reconstituted protein solution can be stored at $2-8^{\circ}\text{C}$ for 2-7 days. Aliquots of reconstituted samples are stable at $\leq -20^{\circ}\text{C}$ for 3 months.
Endotoxin	$< 0.01 \text{ EU}/\mu\text{g}$ as determined by LAL test.
Reconstitution	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than $100\mu\text{g}/\text{ml}$ . Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.

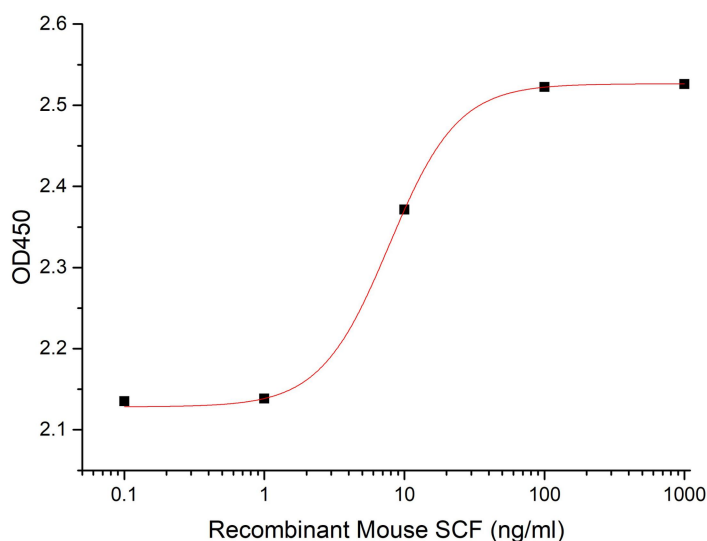
## Experimental Data

### Purity-SDS-PAGE



Greater than 95% as determined by reducing SDS-PAGE. (QC verified)

### Bioactivity-Cell Based Assay



Measured by the dose-dependent stimulation of TF-1 cells. The ED50 for this effect is 4-12 ng/ml. (QC verified)

## Background

Mouse stem cell factor (SCF), is the ligand for the receptor-type protein-tyrosine kinase KIT. It 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. It also promotes phosphorylation of PIK3R1, which is 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.