

Product datasheet

Recombinant human SCF protein (Active) ab259391

[4 Images](#)

Description

Product name	Recombinant human SCF protein (Active)	
Biological activity	Fully biologically active when compared to standard. ED ₅₀ is ≤ 0.9601 ng /ml, corresponding to a specific activity of 1.04x 10 ⁶ units/mg.	
Purity	≥ 95 % SDS-PAGE. Purity by HPLC ≥ 95%.	
Endotoxin level	≤ 0.005 Eu/μg	
Expression system	HEK 293 cells	
Accession	<u>P21583</u>	
Protein length	Protein fragment	
Animal free	No	
Carrier free	Yes	
Nature	Recombinant	
Species	Human	
Sequence	EGICRNRVTN NVKDVTKLVA NLPKDYMITL KYVPGMDVLP SHCWISEMVV QLSDSLTDLL DKFSNISEGL SNYSIIDKLV NMDDLVECV KENSSKDLKK SFKSPEPRLF TPEEFFRIFN RSIDAFKDFV VASETSDCVV SSTLSPEKDS RVSVTKPFML PPVAA	
Predicted molecular weight	19 kDa	
Molecular weight information	M+1.15 Da (calc MW 18586.85 Da)	
Amino acids	26 to 190	
Additional sequence information	N-terminal glycine. Soluble KIT ligand domain.	

Specifications

Our **Abpromise guarantee** covers the use of **ab259391** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Cell Culture
	HPLC
	Mass Spectrometry

SDS-PAGE

Functional Studies

Form Lyophilized

Additional notes This protein is filter sterilised prior to aliquoting and lyophilisation. All aliquoting and lyophilisation steps are performed in a sterile environment

Preparation and Storage

Stability and Storage Shipped at Room Temperature. Store at Room Temperature.

pH: 6.00

Constituents: 0.727% Dibasic monohydrogen potassium phosphate, 0.248% Monobasic dihydrogen potassium phosphate, 10.26% Trehalose

Buffer lyophilised from

This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitution Reconstitute in PBS, aliquot and store at -80 C for 12 months or 4 C for 1 week. Avoid repeated freeze thaw. Lyophilized contents may appear as either a translucent film or a white powder. This variance does not affect the quality of the product.

General Info

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.

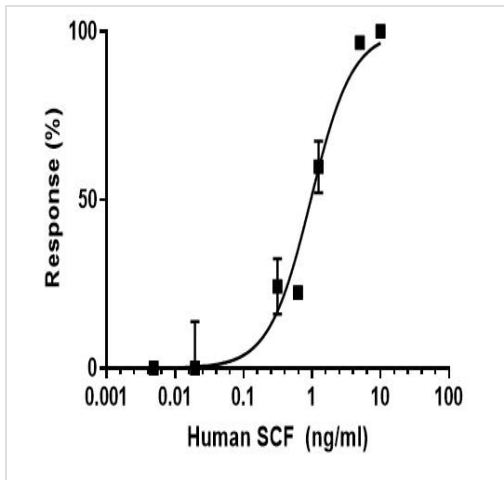
Post-translational modifications A soluble form (sKITLG) is produced by proteolytic processing of isoform 1 in the extracellular domain.

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.

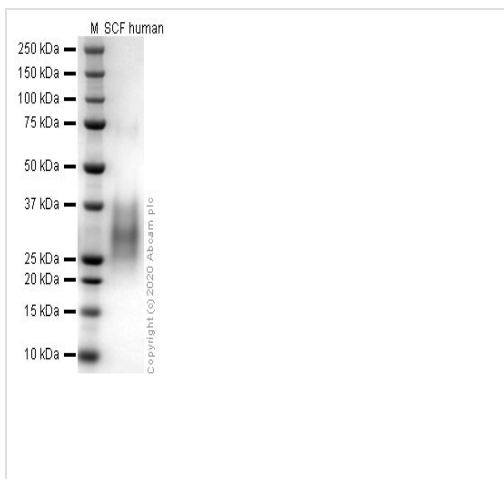
Cellular localization Secreted; Cell membrane and Cytoplasm. Cytoplasm, cytoskeleton. Cell membrane. Cell projection, lamellipodium. Cell projection, filopodium.

Images



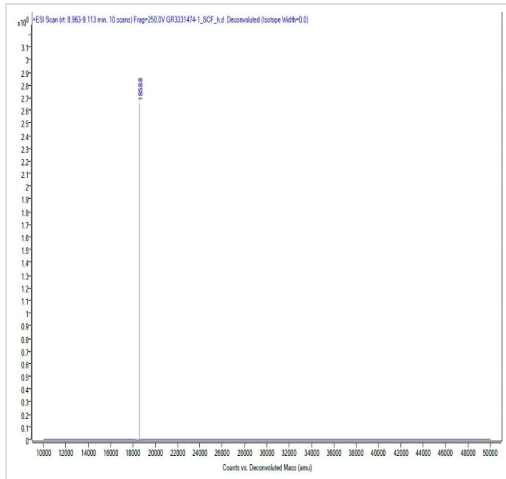
Fully biologically active when compared to standard. Determined by dose-dependant stimulation of human TF-1 cells. ED_{50} is ≤ 0.9601 ng/ml, corresponding to a specific activity of 1.04×10^6 units/mg.

Functional Studies - Recombinant human SCF protein (Active) (ab259391)



SDS-PAGE analysis of ab259391.

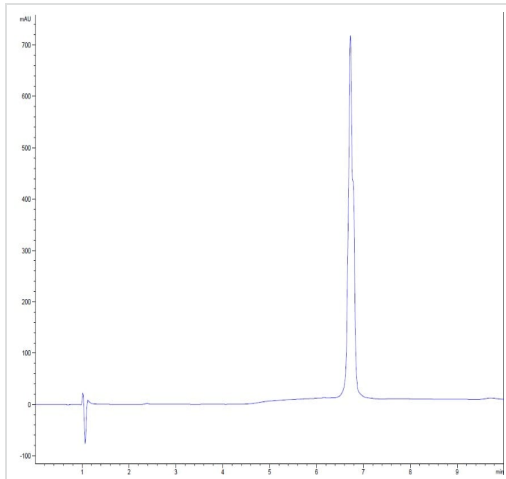
SDS-PAGE - Recombinant human SCF protein (Active) (ab259391)



Mass Spectrometry - Recombinant human SCF protein (Active) (ab259391)

$M + 0.9 \text{ Da}$ (calc mass 18586.85)

The spectrum was recorded with a 6545XT AdvanceBio LC/Q-TOF (Agilent Technologies) and a MabPac RP column (42.1x50 mm, 4 μm , Thermo Scientific). 5 μL of purified protein was injected and the gradient run from 85 % water:FA (99.9:0.1 v/v) and 15 % acetonitrile:FA (90:9.9:0.1 v/v/v) to 55 % water:FA (99.9:0.1 v/v) and 45 % acetonitrile:FA (90:9.9:0.1 v/v/v) within 3 minutes followed by an isocratic step for another 2.5 min. Flow rate was 0.4 mL/min and the column compartment temperature was 60 $^{\circ}\text{C}$. Data was analysed and deconvoluted using the Bioconfirm software (Agilent Technologies).



HPLC - Recombinant human SCF protein (Active) (ab259391)

Purity: 95%

The spectrum was recorded using a 1260 Infinity II HPLC system with DAD and a MabPac RP column (3.0x100 mm, 4 μm). 5 μL of purified protein was injected and the gradient run from 80 % water:TFA (99.9:0.1 v/v) and 20 % acetonitrile:water:TFA (90:9.9:0.1 v/v/v) to 20 % water:TFA (99.9:0.1 v/v) and 80 % acetonitrile:water:TFA (90:9.9:0.1 v/v/v) within 3 minutes followed by an isocratic step for another 3 min. Flow rate was 0.5 mL/min and the column compartment temperature was 50 $^{\circ}\text{C}$.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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