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Datasheet for ABIN1889301

KIT Ligand ELISA Kit

1 Image

1 Publication

Overview

Quantity:	96 tests
Target:	KIT Ligand (KITLG)
Binding Specificity:	AA 26-190
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse SCF
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: K26-A190
Specificity:	Expression system for standard: E.coli Immunogen sequence: K26-A190
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity: <10pg/mL

Material not included: Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target: KIT Ligand (KITLG)

Alternative Name: KITLG ([KITLG Products](#))

Background: Protein 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.

Background: Stem Cell Factor (also known as SCF, kit-ligand, KL, or steel factor) is a cytokine that binds to the c-Kit receptor (CD117). It is mapped to 12q21.32. SCF was primarily expressed by perivascular cells throughout the bone marrow, and it plays a role in the regulation of HSCs in the stem cell niche in the bone marrow. SCF can exist both as a transmembrane protein and a soluble protein. This gene plays an important role in the hematopoiesis during embryonic development. During development, the presence of the SCF also plays an important role in the localization of melanocytes, cells that produce melanin and control pigmentation. In addition to it, SCF can promote mast cell adhesion, migration, proliferation, and survival. It also promotes the release of histamine and tryptase, which are involved in the allergic response.

Synonyms: Kit ligand,Hematopoietic growth factor KL,Mast cell growth factor,MGF,Steel factor,Stem cell factor,SCF,c-Kit ligand,Soluble KIT ligand,sKITLG,Kitlg,Kitl, Mgf, Sl, Slf,
Full Gene Name: Kit ligand

Cellular Localisation: Isoform 1: Cell membrane, Single-pass type I membrane protein.

Gene ID: 17311

Target Details

UniProt:	P20826
Pathways:	RTK Signaling , Fc-epsilon Receptor Signaling Pathway , EGFR Signaling Pathway , Neurotrophin Signaling Pathway

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Plate:	Pre-coated
Protocol:	mouse SCF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for SCF has been precoated onto 96-well plates. Standards(E.coli, K26-A190) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for SCF is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse SCF amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL mouse SCF standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse cell culture supernates, serum or plasma(EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse SCF standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 153, Standard deviation: 6.12, CV(%): 4• Sample 2: n=16, Mean(pg/ml): 690, Standard deviation: 24.84, CV(%): 3.6• Sample 3: n=16, Mean(pg/ml): 1558, Standard deviation: 73.2, CV(%): 4.7,• Sample 1: n=24, Mean(pg/ml): 140, Standard deviation: 10.5, CV(%): 7.5• Sample 2: n=24, Mean(pg/ml): 741, Standard deviation: 45.94, CV(%): 6.2• Sample 3: n=24, Mean(pg/ml): 1447, Standard deviation: 120.1, CV(%): 8.3

Restrictions:	For Research Use only
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Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
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Handling

Storage: -20 °C, 4 °C

Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

Expiry Date: 12 months

Publications

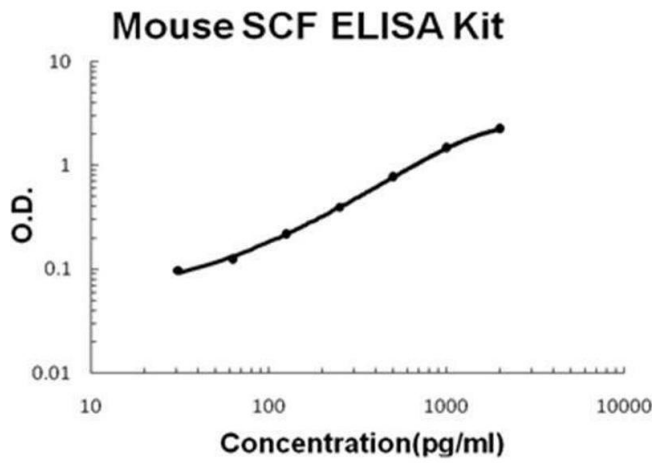
Product cited in: Zhang, Shi, Zou, Chen, Tang, Ye, Liu: "High glucose stimulates cell proliferation and Collagen IV production in rat mesangial cells through inhibiting AMPK-KATP signaling." in: **International urology and nephrology**, Vol. 49, Issue 11, pp. 2079-2086, (2018) ([PubMed](#)).

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Cavdar, Ozbal, Celik, Ergur, Guneli, Ural, Camsari, Guner: "The effects of alpha-lipoic acid on MMP-2 and MMP-9 activities in a rat renal ischemia and re-perfusion model." in: **Biotechnic & histochemistry : official publication of the Biological Stain Commission**, Vol. 89, Issue 4, pp. 304-14, (2014) ([PubMed](#)).

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ELISA

Image 1. Mouse SCF PicoKine ELISA Kit standard curve