Datasheet for ABIN1672811

KIT ELISA Kit

1 Image

Go to Product page

Overview

Quantity:	96 tests
Target:	KIT
Binding Specificity:	AA 26-520
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	156-10000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human KIT/SCFR
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: sf21 Immunogen sequence: Q26-T520
Specificity:	Expression system for standard: sf21 Immunogen sequence: Q26-T520
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
Alternative Name:	KIT/SCFR (KIT Products)
Background:	Protein Function: Tyrosine-protein kinase that acts as cell-surface receptor for the cytokine KITLG/SCF and 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. In response to KITLG/SCF binding, KIT can activate several signaling pathways. Phosphorylates PIK3R1, PLCG1, SH2B2/APS and CBL. Activates the AKT1 signaling pathway by phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Activated KIT also transmits signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. Promotes activation of STAT family members STAT1, STAT3, STAT5A and STAT5B. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. KIT signaling is modulated by protein phosphatases, and by rapid internalization and degradation of the receptor. Activated KIT promotes phosphorylation of the protein phosphatases PTPN6/SHP-1 and PTPRU, and of the transcription factors STAT1, STAT3, STAT5A and STAT5B. Promotes phosphorylation of PIK3R1, CBL, CRK (isoform Crk-II), LYN, MAPK1/ERK2 and/or MAPK3/ERK1, PLCG1, SRC and SHC1. . Background: SCFR(Mast/stem cell growth factor receptor), also known as proto-oncogene c-Kit or tyrosine-protein kinase Kit or CD117, is a protein that in humans is encoded by the KIT gene. KIT was first described as the cellular homolog of the feline sarcoma viral oncogene v-kit. The KIT gene is mapped on 4q12. Kit was expressed on the surface of germ cells up to the pachytene stage. Signaling from the KIT receptor tyrosine kinase is essential for primordial germ cell growth both in vivo and in vitro. Determination of the KIT effectors acting in primordial germ cells has been hampered by the lack of effective methods to manipulate easily gene expression in these cells. Synonyms: Mast/stem cell growth factor receptor Kit,SCFR,2.7.10.1,Piebald trait protein,PBT,Proto-oncogene c-Kit,Tyrosine-protein kinase Kit,p145 c-kit,v-kit Hardy-Zuckerman

Target Details

	4 feline sarcoma viral oncogene homolog,CD117,KIT,SCFR, Full Gene Name: Mast/stem cell growth factor receptor Kit Cellular Localisation: Isoform 1: Cell membrane, Single-pass type I membrane protein.
Gene ID:	3815
UniProt:	P10721
Pathways:	RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Sensory Perception of Sound, Stem Cell Maintenance, Production of Molecular Mediator of Immune Response, Regulation of long-term Neuronal Synaptic Plasticity

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.
Comment:	Sequence similarities: Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily. Tissue Specificity: Isoform 1 and isoform 2 are detected in spermatogonia and Leydig cells. Isoform 3 is detected in round spermatids, elongating spermatids and spermatozoa (at protein level). Widely expressed. Detected in the hematopoietic system, the gastrointestinal system, in melanocytes and in germ cells. .
Plate:	Pre-coated
Protocol:	human KIT ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for KIT has been precoated onto 96-well plates. Standards(sf21, Q26-T520) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for KIT 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 human KIT amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 313pg/mL, 156pg/mL human KIT 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 human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that

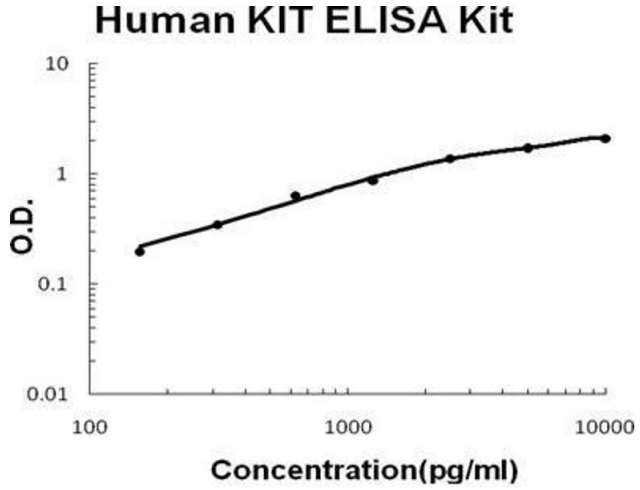
Application Details

	each human KIT standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 1305, Standard deviation: 86.13, CV(%): 6.6 • Sample 2: n=16, Mean(pg/ml): 3824, Standard deviation: 141.5, CV(%): 3.7 • Sample 3: n=16, Mean(pg/ml): 5941, Standard deviation: 314.9, CV(%): 5.3, • Sample 1: n=24, Mean(pg/ml): 1462, Standard deviation: 108.2, CV(%): 7.4 • Sample 2: n=24, Mean(pg/ml): 4096, Standard deviation: 204.8, CV(%): 5 • Sample 3: n=24, Mean(pg/ml): 6175, Standard deviation: 419.9, CV(%): 6.8
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
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

Images



ELISA

Image 1. Human KIT/SCFR PicoKine ELISA Kit standard curve