abcam

Product datasheet

Recombinant human c-Kit protein (Fc Chimera Active) ab219878

3 Images

Description

Product name	Recombinant human c-Kit protein (Fc Chimera Active)
Biological activity	Measured by its binding ability in a functional ELISA. Immobilized ab219878 at 2 µg/ml (100 µl/well) can bind Mouse SCF, His Tag with a linear range of 0.05-1.2 ng/ml. Measured by its binding ability in a functional ELISA. Immobilized ab219878 at 2 µg/ml (100 µl/well) can bind Biotinylated Mouse SCF with a linear range of 0.25-20 ng/ml. Immobilized ab219878 at 2 µg/mL (100 µL/well) can bind ab219878 with a linear range of 0.4-2 ng/mL (QC tested).
Purity	> 95 % SDS-PAGE.
Endotoxin level	< 1.000 Eu/µg
Expression system	HEK 293 cells
Accession	P10721-2
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	QPSVSPGEPSPPSIHPGKSDLIVRVGDEIRLLCTDPGFVK WTFEILDETN ENKQNEWITEKAEATNTGKYTCTNKHGLSNSIYVFVRDPA KLFLVDRSLY GKEDNDTLVRCPLTDPEVTNYSLKGCQGKPLPKDLRFIPD PKAGIMIKSV KRAYHRLCLHCSVDQEGKSVLSEKFILKVRPAFKAVPVVS VSKASYLLRE GEEFTVTCTIKDVSSSVYSTWKRENSQTKLQEKYNSWHH GDFNYERQATL TISSARVNDSGVFMCYANNTFGSANVTTTLEVVDKGFINIF PMINTTVFV NDGENVDLIVEYEAFPKPEHQQWIYMNRTFTDKWEDYPK SENESNIRYVS ELHLTRLKGTEGGTYTFLVSNSDVNAAIAFNVYVNTKPEILT

YDRLVNGM
LQCVAAGFPEPTIDWYFCPGTEQRCSASVLPVDVQTLNS
SGPPFGKLVVQ
SSIDSSAFKHNGTVECKAYNDVGKTSAYFNFAFKEQIHPH
T

Predicted molecular weight	82 kDa including tags
Molecular weight information	The protein has a calculated MW of 81.9 kDa. The protein migrates as 116-130 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Amino acids	26 to 516
Tags	Fc tag C-Terminus
Additional sequence information	Fused with a human IgG1 Fc tag at the C-terminus.

Specifications

Our **Abpromise guarantee** covers the use of **ab219878** in the following tested applications.

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

Applications	ELISA SDS-PAGE
Form	Lyophilized
Additional notes	This product is stable after storage at: -20°C to -70°C for 12 months in lyophilized state; -70°C for 3 months under sterile conditions after reconstitution.

Preparation and Storage

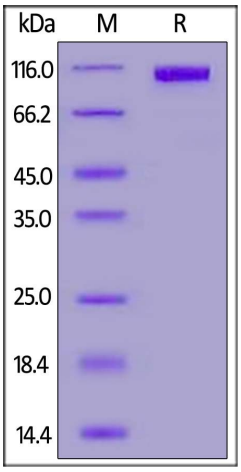
Stability and Storage	Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.4 Constituents: 0.61% Tris, 0.75% Glycine, 5% Trehalose, L-Arginine, Sodium chloride Lyophilized from 0.22 µm filtered solution. 5-10% trehalose is commonly used for freeze drying, and after reconstitution, the trehalose is mostly about 3-5% This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Reconstitute with sterile deionized water to a concentration of 200 µg/ml.

General Info

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,

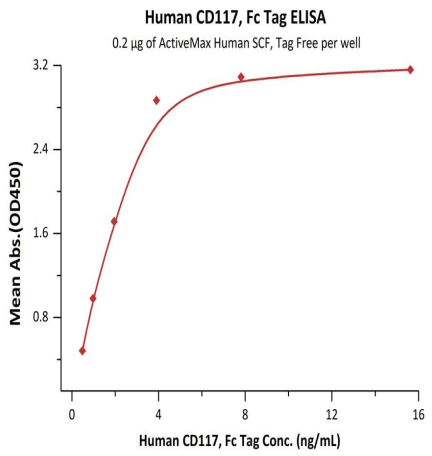
	STAT3, STAT5A and STAT5B. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. KIT signaling is modulated by protein phosphatases, and by rapid internalization and degradation of the receptor. Activated KIT promotes phosphorylation 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.
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.
Involvement in disease	Piebald trait Gastrointestinal stromal tumor Testicular germ cell tumor Leukemia, acute myelogenous
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily. Contains 5 Ig-like C2-type (immunoglobulin-like) domains. Contains 1 protein kinase domain.
Post-translational modifications	Ubiquitinated by SOCS6. KIT is rapidly ubiquitinated after autophosphorylation induced by KITLG/SCF binding, leading to internalization and degradation. Autophosphorylated on tyrosine residues. KITLG/SCF binding enhances autophosphorylation. Isoform 1 shows low levels of tyrosine phosphorylation in the absence of added KITLG/SCF (in vitro). Kinase activity is down-regulated by phosphorylation on serine residues by protein kinase C family members. Phosphorylation at Tyr-568 is required for interaction with PTPN11/SHP-2, CRK (isoform Crk-II) and members of the SRC tyrosine-protein kinase family. Phosphorylation at Tyr-570 is required for interaction with PTPN6/SHP-1. Phosphorylation at Tyr-703, Tyr-823 and Tyr-936 is important for interaction with GRB2. Phosphorylation at Tyr-721 is important for interaction with PIK3R1. Phosphorylation at Tyr-823 and Tyr-936 is important for interaction with GRB7.
Cellular localization	Cell membrane and Cytoplasm. Detected in the cytoplasm of spermatozoa, especially in the equatorial and subacrosomal region of the sperm head.

Images



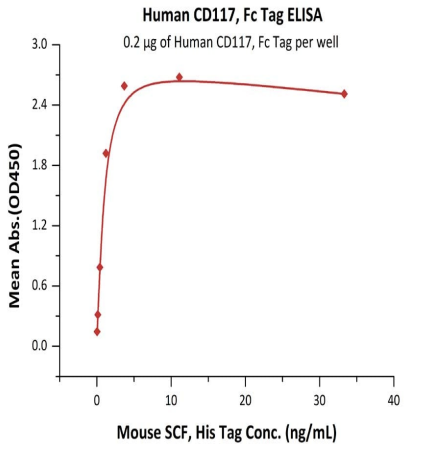
SDS-PAGE - Recombinant human c-Kit protein (Fc Chimera Active) (ab219878)

Human CD117, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



ELISA - Recombinant human c-Kit protein (Fc Chimera Active) (ab219878)

Immobilized ActiveMax Human SCF, Tag Free at 2 μg/mL (100 μL/well) can bind Human CD117, Fc Tag with a linear range of 0.4-2 ng/mL (QC tested).



ELISA - Recombinant human c-Kit protein (Fc Chimera Active) (ab219878)

Human CD1117, Fc Tag (ab219878) at 2 ug/mL (100 uL/well) can bind Mouse SCF, His Tag (**ab221333**) with a linear range of 0.05-1 ng/mL.

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