

Product datasheet

Recombinant Human c-Kit protein ab207135

1 Image

Description

Product name	Recombinant Human c-Kit protein	
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	<p>QPSVSPGEPSPPSIHPGKSDLIVRVGDEIRLLCTDPGFVK WTFEILDETN ENKQNEWITEKAEATNTGKYCTNKHGLSNSIYFVRDPA KLFLVDRSLY GKEDNDTLVRCPLTDPEVTNYSKGCQGKPLPKDLRFIPD PKAGIMIKSV KRAYHRLCLHCSVDQEGKSVLSEKFIKVRPAFKAVPVVS VSKASYLLRE GEEFTVTCTIKDVSS SVYSTWKRENSQTKLQEKYNSWHHGDFNYERQA TLTISSARVNDSGVFMCYANNTFGSAN/TTTLEVVDKGFINI FPMINTTV FVNDGENVDLIVEYEAFPKPEHQWIMNRTFTDKWEDY PKSENESNIRY VSELHLTRLKGTGGTYTFLVSNSDVNAIAFNVYVNTKPE ILTYDRLVN GMLQCVAAGFPEPTIDWYFCPGTEQRCSASVLPVDVQTL NSSGPPFGKLV VQSSIDSSAFKHNGTVECKAYNDVGKTSAYFNFAFKEQIH PHT</p>	
Predicted molecular weight	57 kDa including tags	
Amino acids	26 to 516	
Tags	His tag C-Terminus	

Specifications

Our [Abpromise guarantee](#) covers the use of **ab207135** in the following tested applications.

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

Applications	SDS-PAGE
Form	Lyophilized

Preparation and Storage

Stability and Storage Shipped at 4°C. Store at 4°C (stable for up to 12 months). Store at -20°C or -80°C. Avoid freeze / thaw cycle. For long term storage it is recommended to add a carrier protein on reconstitution (0.1% HSA or BSA).

pH: 7.40

Constituents: PBS, 5% Trehalose

Lyophilized from 0.22 µm filtered solution.

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

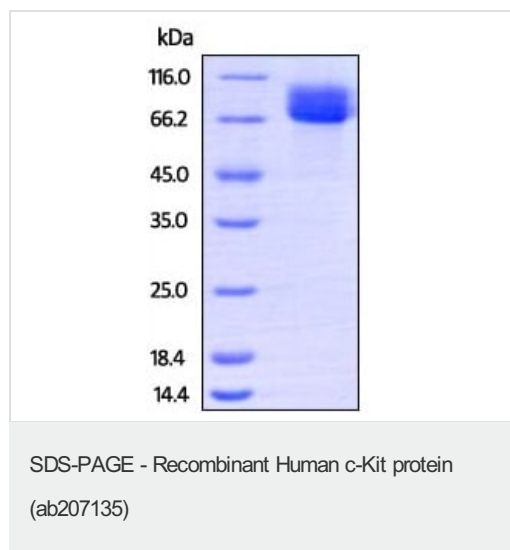
Ubiquitinated by SOCS6. KIT is rapidly ubiquitinated after autophosphorylation induced by KITLG/SCF binding, leading to internalization and degradation.

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



DTT-reduced SDS-PAGE analysis of ab207135 stained overnight with Coomassie Blue.

DTT-reduced protein migrates as 66-85 kDa in SDS-PAGE due to glycosylation.

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