

Recombinant human c-Kit (mutated Y823D) protein ab184889

5 Images

Description

Product name	Recombinant human c-Kit (mutated Y823D) protein		
Biological activity	The specific activity of ab184889 was determined to be 5 nmol/mg/ml by activity assay.		
Purity	> 70 % Densitometry. Affinity purified.		
Expression system	Baculovirus infected Sf9 cells		
Accession	<u>P10721</u>		
Protein length	Protein fragment		
Animal free	No		
Nature	Recombinant		
Species	Human		
Sequence	TYKYLQK PMYEVQWKVV EEINGNNVYV IDPTQLPYDH KWEFPRNRLS FGKTLGAGAF GKVVEATAYG LIKSDAAMTV AVKMLKPSAH LTEREALMSE LKVLSYLGNH MNVNLLGAC TIGGPTLVIT EYCCYGDLLN FLRRKRDSFI CSKQEDHAEA ALYKNLLHSK ESSCSDSTNE YMDMKPGVSY VVPTKADKRR SVRIGSYIER DVTPAIMEDD ELALDLEDLL SFSYQVAKGM 790 800 810 820 830 840 AFLASKNCIH RDLAARNILL THGRITKICD FGLARDIKND SNDVVKGKNAR LPVKWMAPES IFNCVYTFES DVWSYGIFLW ELFSLGSSPY PGMPVDSKFY KMIKEGFRML SPEHAPAEMY DIMKTCWDAD PLKRPTFKQI VQLIEKQISE STNHIYSNLA NCSPNRQKPV VDHSVRINSV		
Predicted molecular weight	73 kDa including tags		
Amino acids	544 to 976		
Modifications	mutated Y823D		
Tags	proprietary tag N-Terminus		

Specifications

Our **Abpromise guarantee** covers the use of **ab184889** 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
	Functional Studies
Form	Liquid
Additional notes	It is recommended to store this protein at -80°C in glycerol to preserve the activity of the protein.

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.
	pH: 7.50
	Constituents: 0.79% Tris HCl, 0.88% Sodium chloride, 0.31% Glutathione, 0.003% EDTA, 0.004% DTT, 0.002% PMSF, 25% Glycerol (glycerin, glycerine)
	This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

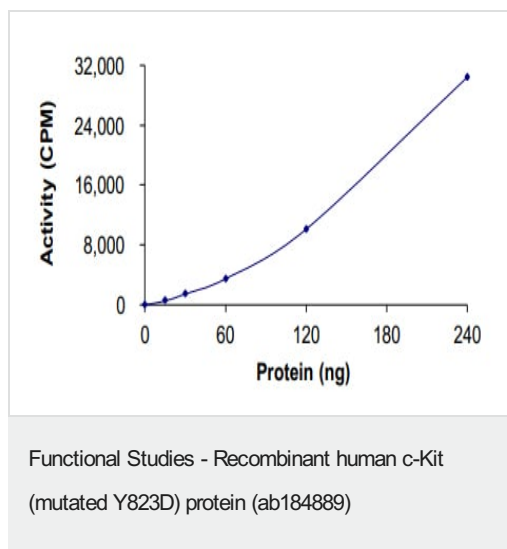
Function	Tyrosine-protein kinase that acts as cell-surface receptor for the cytokine KITLG/SCF and plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. In 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.

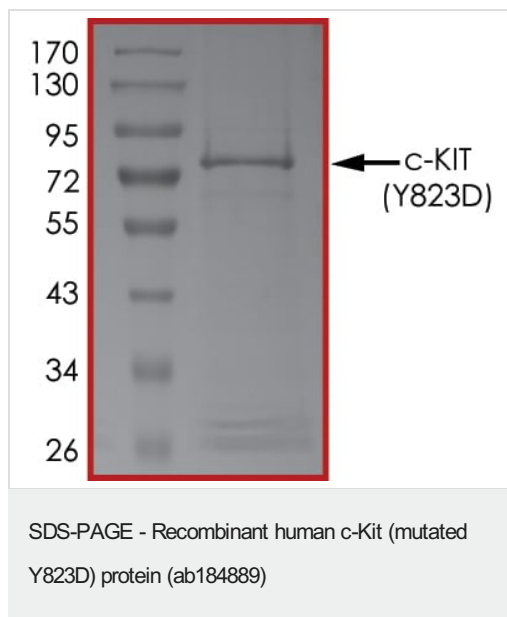
Cellular localization

Cell membrane and Cytoplasm. Detected in the cytoplasm of spermatozoa, especially in the equatorial and subacrosomal region of the sperm head.

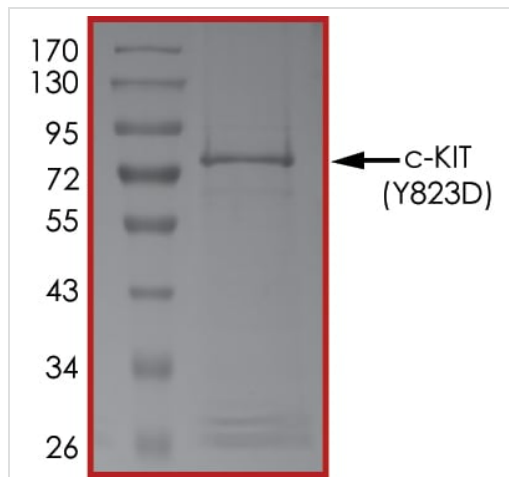
Images



The specific activity of c-Kit (ab184889) was determined to be 6 nmol/min/mg as per activity assay protocol

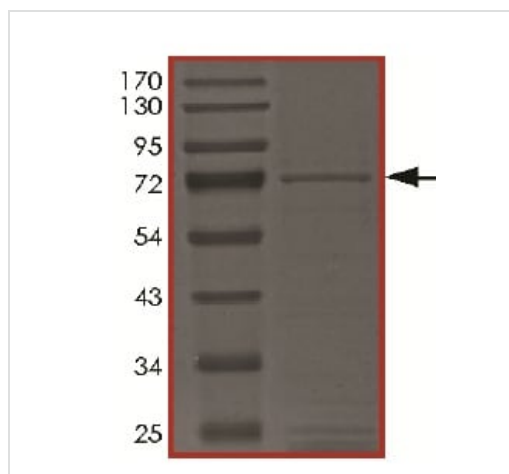


SDS PAGE analysis of ab184889



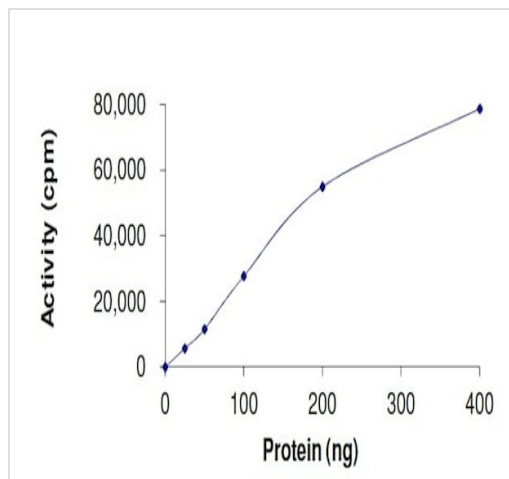
SDS PAGE analysis of ab184889

SDS-PAGE - Recombinant human c-Kit (mutated Y823D) protein (ab184889)



SDS-PAGE analysis of ab184889.

SDS-PAGE - Recombinant human c-Kit (mutated Y823D) protein (ab184889)



The specific activity of ab184889 was determined to be 5 nmol/mg/ml by activity assay.

Functional Studies - Recombinant human c-Kit
(mutated Y823D) protein (ab184889)

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