abcam

Product datasheet

Recombinant human c-Kit (mutated V654A) protein ab63179

画像数 5

製品の詳細

製品名	Recombinant human c-Kit (mutated V654A) protein
生理活性	Specific activity of 7nmol/min/mg
精製度	> 80 % Densitometry. Affinity purified.
発現系	Baculovirus infected Sf9 cells
タンパク質長	Protein fragment
Animal free	No
由来	Recombinant
生物種	Human
予測される分子量	73 kDa including tags
領域	544 to 976
修飾	mutated V654
タグ	GST tag N-Terminus

特性

Our **Abpromise guarantee** covers the use of **ab63179** in the following tested applications.

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

アプリケーション	SDS-PAGE Functional Studies
製品の状態	Liquid
備考	V654A is a common mutation of c-Kit responsible for resistance to the anti-tumour drug imatinib in GIST (gastrointestinal stromal tumor) patients.

前処理および保存

保存方法および安定性	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.0038% EGTA, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292%

EDTA, 25% Glycerol (glycerin, glycerine), 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

関連情報

機能

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.

組織特異性

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.

関連疾患

Piebald trait
Gastrointestinal stromal tumor
Testicular germ cell tumor
Leukemia, acute myelogenous

配列類似性

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.

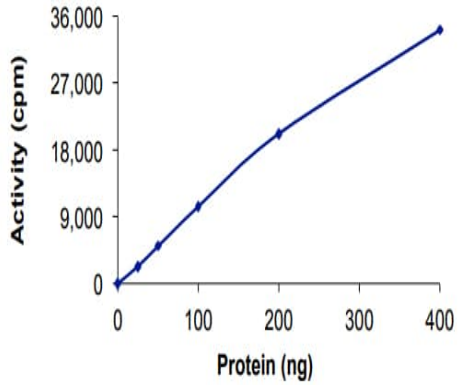
翻訳後修飾

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.

細胞内局在

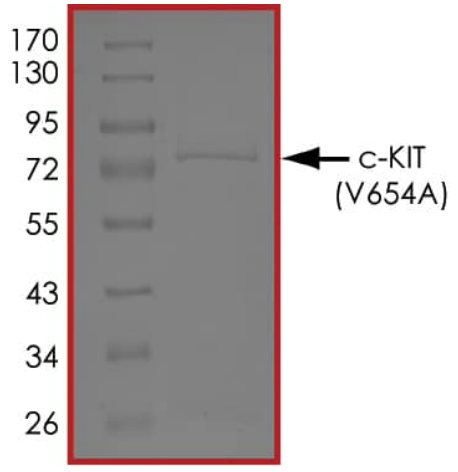
Cell membrane and Cytoplasm. Detected in the cytoplasm of spermatozoa, especially in the equatorial and subacrosomal region of the sperm head.

画像



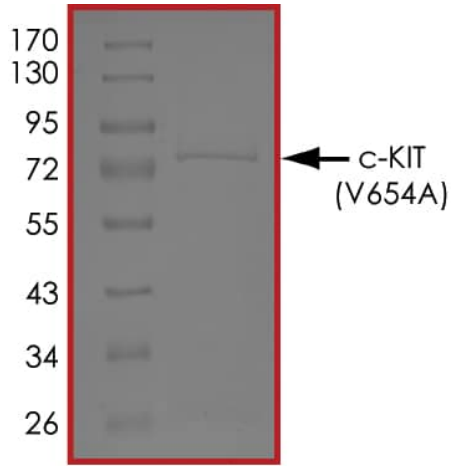
Functional Studies - Recombinant human c-Kit (mutated V654A) protein (ab63179)

The specific activity of c-Kit (ab63179) was determined to be 7 nmol/min/mg as per activity assay protocol



SDS-PAGE - Recombinant human c-Kit (mutated V654A) protein (ab63179)

SDS PAGE analysis of ab63179



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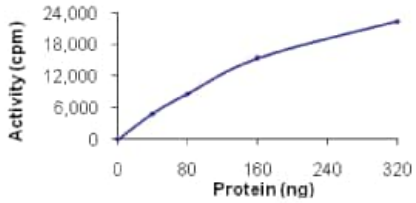
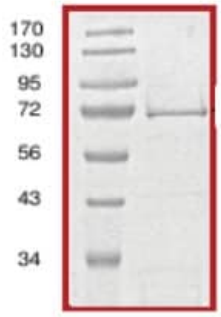


Kinase activity plot

Functional Studies - Recombinant human c-Kit (mutated V654A) protein (ab63179)



ab63179 on SDS-PAGE, MW 73kDa.

SDS-PAGE - Recombinant human c-Kit (mutated V654A) protein (ab63179)

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