

Phospho-C-Kit-Y721 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AE1008c

Specification

Phospho-C-Kit-Y721 Antibody - Product Information

Application	WB
Primary Accession	P10721
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Concentration	1mg/ml
Isotype	Rabbit IgG
Calculated MW	109865

Phospho-C-Kit-Y721 Antibody - Additional Information

Gene ID 3815

Other Names

Mast/stem cell growth factor receptor Kit, SCFR, Piebald trait protein, PBT, Proto-oncogene c-Kit, Tyrosine-protein kinase Kit, p145 c-kit, v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog, CD117, KIT, SCFR

Target/Specificity

The antibody was affinity-purified from rabbit antiserum using epitope-specific phosphopeptide column, and the antibody against non-phosphopeptide was removed using non-phosphopeptide column corresponding to the phosphorylation site.

Dilution

WB~~1:500~1:1000

Format

affinity Purified IgG, in PBS, 0.02% sodium azide and 50% glycerol.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-C-Kit-Y721 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-C-Kit-Y721 Antibody - Protein Information

Name KIT

Synonyms SCFR

Function

Tyrosine-protein kinase that acts as a 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.

Cellular Location

[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Isoform 3]: Cytoplasm. Note=Detected in the cytoplasm of spermatozoa, especially in the equatorial and subacrosomal region of the sperm head.

Tissue Location

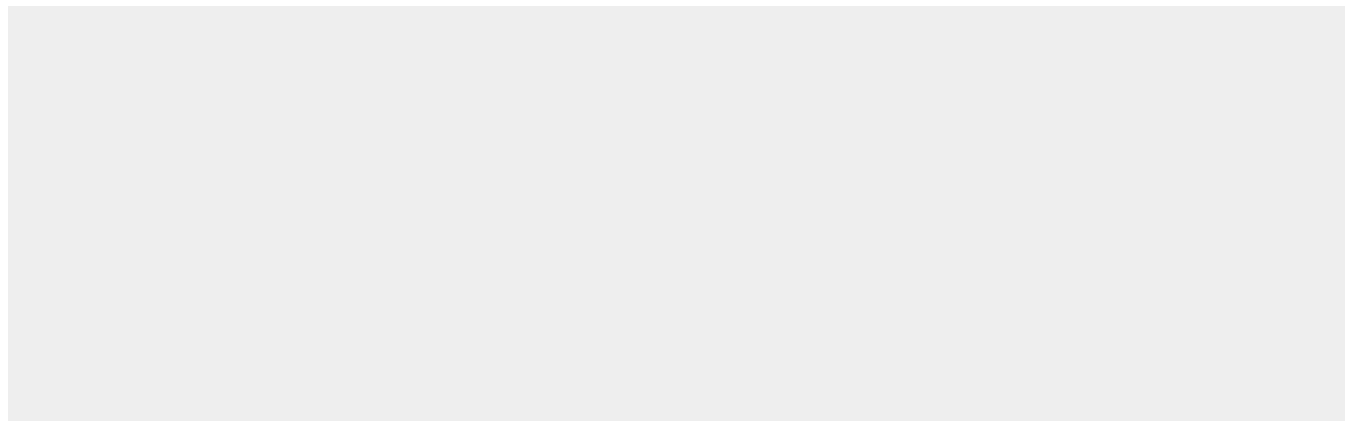
[Isoform 3]: In testis, detected in spermatogonia in the basal layer and in interstitial Leydig cells but not in Sertoli cells or spermatocytes inside the seminiferous tubules (at protein level) (PubMed:20601678). Expression is maintained in ejaculated spermatozoa (at protein level) (PubMed:20601678)

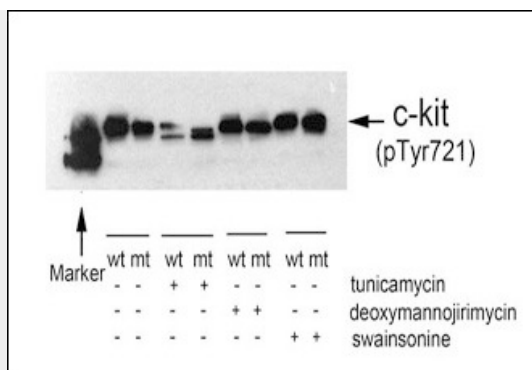
Phospho-C-Kit-Y721 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Phospho-C-Kit-Y721 Antibody - Images





Western blot analysis of extracts from 293T cells(transfected with wild or mutant type c-kit/pc DNA3.1) treated with SCF(100ng/ml, 15min), using Phospho-C-Kit-Y721 Antibody (#AE1008c).

Phospho-C-Kit-Y721 Antibody - Background

This gene encodes the human homolog of the proto-oncogene c-kit. C-kit was first identified as the cellular homolog of the feline sarcoma viral oncogene v-kit. This protein is a type 3 transmembrane receptor for MGF (mast cell growth factor, also known as stem cell factor). Mutations in this gene are associated with gastrointestinal stromal tumors, mast cell disease, acute myelogenous leukemia, and piebaldism. Multiple transcript variants encoding different isoforms have been found for this gene.

Phospho-C-Kit-Y721 Antibody - References

Efficacy evaluation of imatinib treatment in patients with gastrointestinal stromal tumors: a meta-analysis. Chen P, et al. World J Gastroenterol, 2010 Sep 7. PMID 20806443.
KIT polymorphisms and mutations determine responses of neoplastic mast cells to bafetinib (INNO-406). Peter B, et al. Exp Hematol, 2010 Sep. PMID 20685234.
Prognostic relevance of KIT and PDGFRA mutations in gastrointestinal stromal tumors. Braggio E, et al. Anticancer Res, 2010 Jun. PMID 20651400.
Promoter polymorphisms and methylation of E-cadherin (CDH1) and KIT in gastric cancer patients from northern Brazil. Borges Bdo N, et al. Anticancer Res, 2010 Jun. PMID 20651373.
Expression of stem cell factor/c-kit signaling pathway components in diabetic fibrovascular epiretinal membranes. Abu El-Asrar AM, et al. Mol Vis, 2010 Jun 15. PMID 20596251.