

APC Anti-c-Kit antibody [YB5.B8] ab95678

3 References

Overview

Product name	APC Anti-c-Kit antibody [YB5.B8]
Description	APC Mouse monoclonal [YB5.B8] to c-Kit
Host species	Mouse
Conjugation	APC. Ex: 645nm, Em: 660nm
Tested applications	Suitable for: Flow Cyt
Species reactivity	Reacts with: Human
Immunogen	Tissue, cells or virus corresponding to Human c-Kit. Human M2 acute myeloid leukemia cells.
Positive control	TF1 cell line.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.09% Sodium azide</p> <p>Constituent: PBS</p>
Purity	Protein G purified
Clonality	Monoclonal
Clone number	YB5.B8
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab95678 in the following tested applications.

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

Application	Abreviews	Notes
Flow Cyt		Use at an assay dependent concentration. ab37391 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

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.

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