

## ARG21047 anti-CD117 / c-Kit antibody [2B8] (FITC)

Package: 100 µg  
Store at: 4°C

### Summary

Product Description	FITC-conjugated Rat Monoclonal antibody [2B8] recognizes CD117 / c-Kit
Tested Reactivity	Ms
Tested Application	FACS, ICC/IF, IHC-Fr
Specificity	Mouse CD117.
Host	Rat
Clonality	Monoclonal
Clone	2B8
Isotype	IgG2b, kappa
Target Name	CD117 / c-Kit
Species	Mouse
Immunogen	Mouse IL-3-dependent bone marrow mast cells
Conjugation	FITC
Alternate Names	PBT; C-Kit; Tyrosine-protein kinase Kit; CD antigen CD117; Mast/stem cell growth factor receptor Kit; CD117; Proto-oncogene c-Kit; SCFR; Piebald trait protein; v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog; p145 c-kit; EC 2.7.10.1

### Application Instructions

Application table	Application	Dilution
	FACS	< 1 µg/10 <sup>6</sup> cells
	ICC/IF	Assay-dependent
	IHC-Fr	Assay-dependent
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

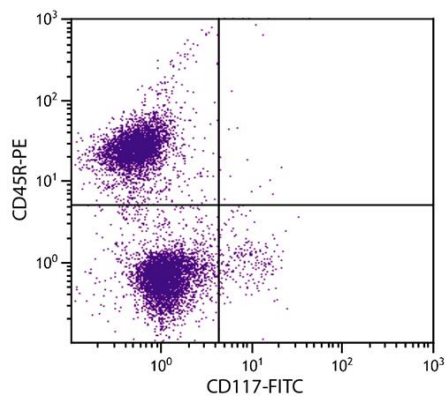
Form	Liquid
Buffer	PBS and 0.1% Sodium azide.
Preservative	0.1% Sodium azide
Concentration	0.5 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

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Database links	<a href="#">GeneID: 16590 Mouse</a> <a href="#">Swiss-port # P05532 Mouse</a>
Gene Symbol	KIT
Gene Full Name	kit oncogene
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. [provided by RefSeq, Jul 2008]
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. [UniProt]
Calculated Mw	110 kDa
PTM	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.



ARG21047 anti-CD117 / c-Kit antibody [2B8] (FITC) FACS image

Flow Cytometry: BALB/c Mouse bone marrow cells stained with ARG21047 anti-CD117 / c-Kit antibody [2B8] (FITC) and [ARG65534](#) anti-CD45R / B220 antibody [RA3-6B2] (PE).