

Technical Data Sheet

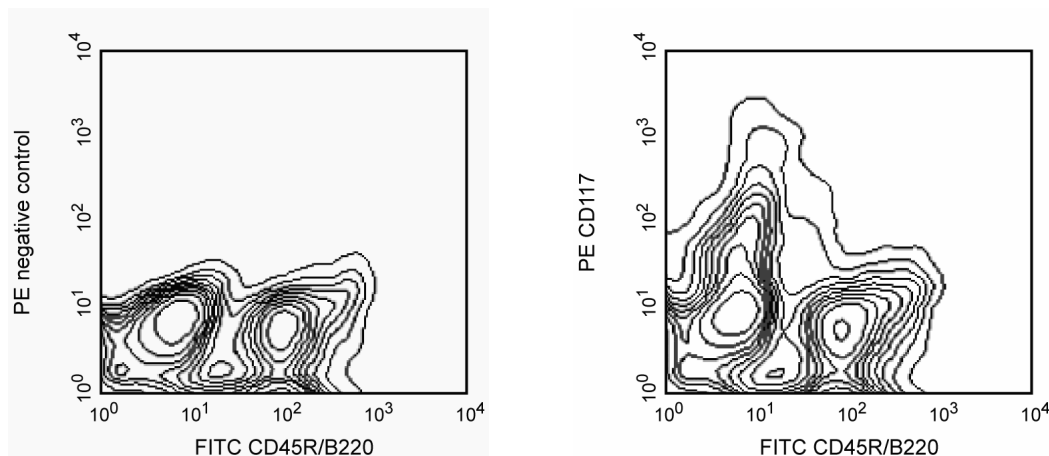
PE Rat Anti-Mouse CD117

Product Information

Material Number:	561075
Alternate Name:	c-Kit
Size:	25 µg
Concentration:	0.2 mg/ml
Clone:	2B8
Immunogen:	Mouse Bone Marrow Mast Cells
Isotype:	Rat (W1) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 2B8 antibody reacts with CD117 (c-Kit), a transmembrane tyrosine-kinase receptor which is encoded by the *Kit* gene (formerly dominant white spotting, *W*). The c-Kit ligand (also known as steel factor, stem cell factor, and mast cell growth factor) encoded by the *Kitl* gene (formerly steel, *Sl*), is a co-mitogen for hematopoietic stem cells, myeloerythroid progenitors and a mast-cell differentiation factor. The *KitW* and *KitlSI* mutant alleles have similar pleiotropic effects on the development of melanocytes, germ cells, and the hematopoietic system. In the adult bone marrow, CD117 is expressed on hematopoietic progenitor cells, including CD90 (Thy-1) low, TER-119-, CD45R/B220-, CD11b (Mac-1)-, Ly-6G (Gr-1)-, CD4-, CD8-, and Sca-1 (Ly-6A/E)+ multipotent hematopoietic stem cells, progenitors committed to myeloid and/or erythroid lineages, and precursors of B and T lymphocytes. This widespread expression of CD117 in hematopoietic precursors is consistent with the participation of c-Kit and its ligand in the regulation of several hematopoietic lineages. Intrathymic expression of c-Kit and c-Kit ligand suggest that CD117 is also involved in the regulation of some events during the development of T lymphocytes. CD117 is also expressed by mast cells and by dendritic cells found in the periarteriolar lymphocytic sheaths (T-cell areas) of splenic white pulp. The mAb 2B8 reportedly does not block the action of c-Kit. This clone 2B8 had been reported that there was cross-reactivity with rat.



Two-color analysis of the expression of CD117 on mouse bone marrow cells. A single-cell suspension of BALB/c bone marrow was simultaneously stained with FITC-conjugated RA3-6B2 (anti-mouse CD45R/B220, Cat. No. 553087/553088, both panels) and PE-conjugated 2B8 (right panel) monoclonal antibodies. Flow cytometry was performed on a BD FACScan™ Flow Cytometry System.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
553989	PE Rat IgG2b, κ Isotype Control	0.1 mg	A95-1

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Austen KF, Boyce JA. Mast cell lineage development and phenotypic regulation. *Leuk Res.* 2001; 25(7):511-518. (Biology)

Domen J, Weissman IL. Hematopoietic stem cells need two signals to prevent apoptosis; BCL-2 can provide one of these, Kitl/c-Kit signaling the other. *J Exp Med.* 2000; 192(12):1707-1718. (Biology)

Fadini GP, Sartore S, Schiavon M, Albiero M, Baesso I, Cabrelle A, Agostini C, Avogaro A. Diabetes impairs progenitor cell mobilisation after hindlimb ischaemia-reperfusion injury in rats. *Diabetologia.* 2006; 49(12):3075-3084. (Clone-specific)

Ikuta K, Weissman IL. Evidence that hematopoietic stem cells express mouse c-kit but do not depend on steel factor for their generation. *Proc Natl Acad Sci U S A.* 1992; 89(4):1502-1506. (Immunogen: Flow cytometry, Immunoprecipitation)