

Technical Data Sheet

Biotin Rat Anti-Mouse CD117

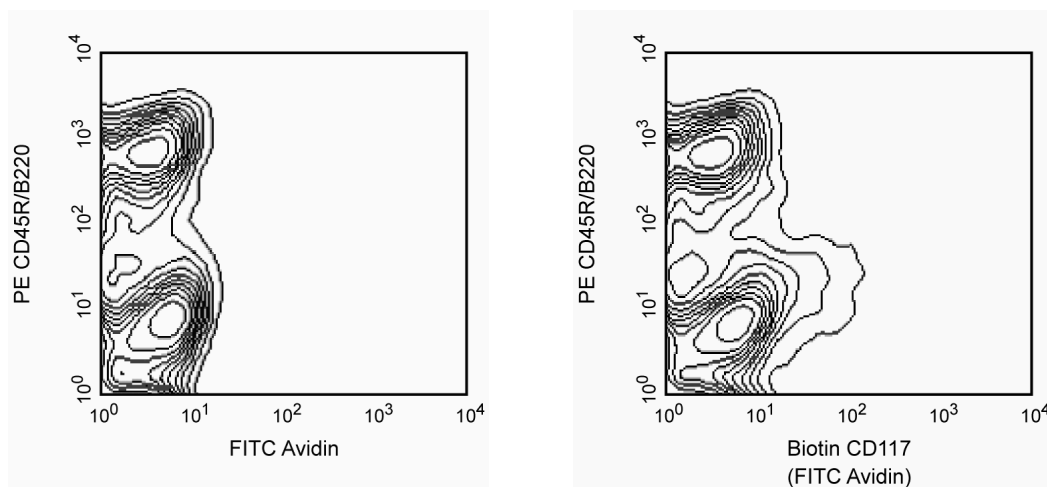
Product Information

Material Number:	553353
Alternate Name:	c-Kit
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	2B8
Immunogen:	Mouse Bone Marrow Mast Cells
Isotype:	Rat (WI) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and $\leq 0.09\%$ 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, myeloid progenitors and a mast-cell differentiation factor. The *Kit^W* and *Kit^{Sl}* 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.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



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 PE-conjugated RA3-6B2 (anti-mouse CD45R/B220, Cat. No. 553089/553090, both panels) and biotin-conjugated 2B8 (bottom) monoclonal antibodies, followed by Avidin-FITC (Cat. No. 554057, both panels). 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 biotin under optimum conditions, and unreacted biotin was removed.

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

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Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
553987	Biotin Rat IgG2b, κ Isotype Control	0.25 mg	A95-1
554061	PE Streptavidin	0.5 mg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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

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