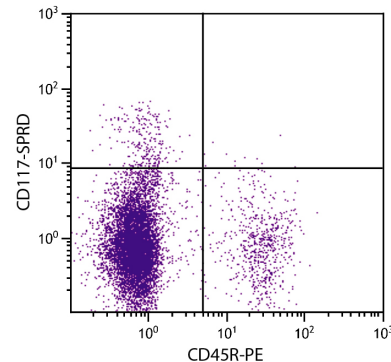




## Rat Anti-Mouse CD117

Cat. No.	Format	Size
1880-01	Purified (UNLB)	0.5 mg
1880-02	Fluorescein (FITC)	0.5 mg
1880-08	Biotin (BIOT)	0.5 mg
1880-09	R-phycoerythrin (PE)	0.1 mg
1880-09L	R-phycoerythrin (PE)	0.2 mg
1880-11	Allophycocyanin (APC)	0.1 mg
1880-13	Spectral Red® (SPRD)	0.1 mg
1880-14	Low Endotoxin, Azide-Free (LE/AF)	0.5 mg
1880-15	Cyanine 5 (CY5)	0.1 mg
1880-18	Allophycocyanin-Cyanine 5.5 (APC/CY5.5)	0.1 mg
1880-19	Allophycocyanin-Cyanine 7 (APC/CY7)	0.1 mg
1880-26	Pacific Blue™ (PACBLU)	0.1 mg
1880-27	Alexa Fluor® 700 (AF700)	0.1 mg
1880-30	Alexa Fluor® 488 (AF488)	0.1 mg
1880-31	Alexa Fluor® 647 (AF647)	0.1 mg



C57BL/6 mouse bone marrow cells were stained with Rat Anti-Mouse CD117-SPRD (SB Cat. No. 1880-13) and Rat Anti-Mouse CD45R-PE (SB Cat. No. 1665-09).

### Overview

<b>Clone</b>	2B8
<b>Isotype</b>	Rat (Wistar) IgG <sub>2b</sub> K
<b>Immunogen</b>	Mouse IL-3-dependent bone marrow mast cells
<b>Specificity</b>	Mouse CD117; Mr 150 kDa
<b>Alternate Name(s)</b>	c-Kit, mast cell growth factor, stem cell factor, steel factor, SCF

### Description

The CD117 (c-Kit) antigen is the cell-surface receptor for stem cell factor (SCF). Together these molecules constitute a ligand/receptor pair which functions to maintain normal hematopoiesis in the adult. Signaling through SCF/c-Kit has an important role in stimulating myeloid and erythroid production of primitive hematopoietic progenitor cells. A variety of cytokines act synergistically with SCF to stimulate proliferation and differentiation of bone marrow progenitor cells. For example, SCF plus IL-7 can stimulate the combined myeloid and B cell differentiation of uncommitted hematopoietic progenitor cells. SCF/c-Kit also participates in erythropoiesis in both the bone marrow and spleen. Loss-of-function mutations for SCF/c-Kit lead to a variety of pleiotropic developmental defects while gain-of-function mutations can lead to constitutive activation of the kit receptor and links to cancer. Examples of the former are mast cell deficiency and severe macrocytic anemia while the latter mutation has been identified in mastocytomas.

### Applications

FC – Quality tested <sup>1,4-8</sup>  
 IHC-FS – Reported in literature <sup>2</sup>  
 ICC – Reported in literature <sup>3</sup>  
 IP – Reported in literature <sup>1</sup>

### Working Dilutions

<b>Flow Cytometry</b>	FITC and PACBLU conjugates	≤ 1 µg/10 <sup>6</sup> cells
	BIOT conjugate	≤ 0.3 µg/10 <sup>6</sup> cells
	PE, APC, SPRD, CY5, APC/CY5.5, and APC/CY7 conjugates	≤ 0.2 µg/10 <sup>6</sup> cells
	AF488 and AF700 conjugates	≤ 0.1 µg/10 <sup>6</sup> cells
	AF647 conjugate	≤ 0.05 µg/10 <sup>6</sup> cells
	For flow cytometry, the suggested use of these reagents is in a final volume of 100 µL	

<b>Other Applications</b>	Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.
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**For Research Use Only. Not for Diagnostic or Therapeutic Use.**

## Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added.* Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL or 0.2 mg in 2.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The allophycocyanin (APC) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The Spectral Red® (SPRD), allophycocyanin-Cyanine 5.5 (APC/CY5.5), and allophycocyanin-Cyanine 7 (APC/CY7) conjugates are supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The low endotoxin, azide-free (LE/AF) antibody is supplied as 0.5 mg purified immunoglobulin in 1.0 mL of PBS. Contains no preservative; handle under aseptic conditions. Store at 2-8°C or aliquot into smaller volumes and store at -20°C. Avoid multiple freeze / thaw cycles.
- The Cyanine 5 (CY5) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The Alexa Fluor® 488 (AF488), Alexa Fluor® 647 (AF647), Alexa Fluor® 700 (AF700), and Pacific Blue™ (PACBLU) conjugates are supplied as 0.1 mg in 0.2 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

## Warning

Some reagents contain sodium azide. Please refer to product specific SDS.

## References

1. 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 USA*. 1992;89:1502-6. (Immunogen, FC, IP)
2. Podd BS, Thoits J, Whitley N, Cheng H, Kudla KL, Taniguchi H, et al. T cells in cryptosporidiosis share TCR  $\gamma$  variable region junctional sequences with  $\gamma\delta$  T cells in the small intestinal epithelium of mice. *J Immunol*. 2006;176:6532-42. (IHC-FS)
3. Åbrink M, Grujic M, Pejler G. Serglycin is essential for maturation of mast cell secretory granule. *J Biol Chem*. 2004;279:40897-905. (ICC)
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7. Filip S, Mokřý J, Vávrová J, Čížková D, Šinkorová Z, Mičuda S, et al. Splenectomy influences homing of transplanted stem cells in bone marrow-ablated mice. *Stem Cells Dev*. 2012;21:702-9. (FC)
8. Ikami K, Tokue M, Sugimoto R, Noda C, Kobayashi S, Hara K, et al. Hierarchical differentiation competence in response to retinoic acid ensures stem cell maintenance during mouse spermatogenesis. *Development*. 2015;142:1582-92. (FC)

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