

Technical Data Sheet

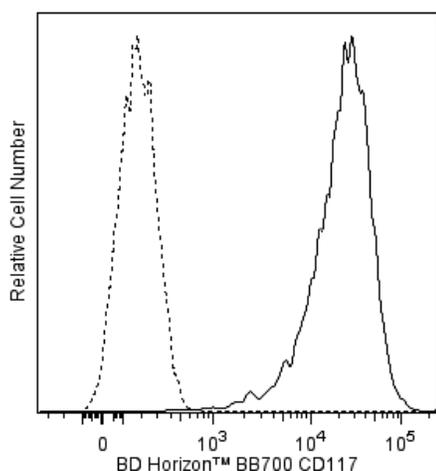
BB700 Mouse Anti-Human CD117**Product Information**

Material Number:	566548
Alternate Name:	KIT; c-Kit; SCFR; PBT; Mast/stem cell growth factor receptor
Size:	100 Tests
Vol. per Test:	5 µl
Clone:	YB5.B8
Immunogen:	Acute myelocytic leukemia blasts
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	V C009
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The YB5.B8 monoclonal antibody specifically binds to CD117, which is also known as c-Kit, or Stem cell factor Receptor (SCFR). CD117 is a ~145 kDa type I transmembrane glycoprotein with tyrosine kinase activity. CD117 is present on hematopoietic progenitor cell subsets, thymocytes, mast cells, hepatocytes and histiocytes. CD117 serves as a cytokine receptor for steel factor (SLF), also known as stem cell factor (SCF), or mast cell growth factor (MGF). The interaction of CD117 and SLF is crucial to hematopoiesis, mast cell differentiation, melanogenesis, and germ cell development. The ability of the YB5.B8 antibody to block the binding of c-Kit ligand is still controversial.

The antibody was conjugated to BD Horizon BB700, which is part of the BD Horizon Brilliant™ Blue family of dyes. It is a polymer-based tandem dye developed exclusively by BD Biosciences. With an excitation max of 485 nm and an emission max of 693 nm, BD Horizon BB700 can be excited by the 488 nm laser and detected in a standard PerCP-Cy™5.5 set (eg, 695/40-nm filter). This dye provides a much brighter alternative to PerCP-Cy5.5 with less cross laser excitation off the 405 nm and 355 nm lasers.



Flow cytometric analysis of CD117 expressed on TF-1 cells. Cells from the human TF-1 (Human erythroleukemia, ATCC Cat. No. CRL-2003) cell line were stained with either BD Horizon™ BB700 Mouse IgG1, κ Isotype Control (Cat. No. 566404; dashed line histogram) or the BD Horizon BB700 Mouse Anti-Human CD117 antibody (Cat. No. 566548/566549; solid line histogram). A fluorescence histogram showing CD117 expression (or Ig Isotype control staining) was derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

Preparation and Storage

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

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

The antibody was conjugated with BD Horizon™ BB700 under optimum conditions, and unconjugated antibody and free BD Horizon BB700 were removed.

Application Notes**Application**

Flow cytometry

Routinely Tested

BD Biosciences

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566548 Rev. 1



Recommended Assay Procedure:

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet for the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

When setting up compensation, it is recommended to compare spillover values obtained from cells and BD™ CompBeads to ensure that beads will provide sufficiently accurate spillover values.

For optimal results, it is recommended to perform two washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescent staining, prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
563794	Brilliant Stain Buffer	100 Tests	(none)
566349	Brilliant Stain Buffer	1000 Tests	(none)
349202	BD FACS™ Lysing Solution	100 mL	(none)
555899	Lysing Buffer	100 mL	(none)
566404	BB700 Mouse IgG1, κ Isotype Control	50 µg	X40
566549	BB700 Mouse Anti-Human CD117	25 Tests	YB5.B8
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
6. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
7. BD Horizon Brilliant Blue 700 is covered by one or more of the following US patents: 8,455,613 and 8,575,303.
8. Cy is a trademark of GE Healthcare.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Lerner NB, Nocka KH, Cole SR, et al. Monoclonal antibody YB5.B8 identifies the human c-kit protein product. *Blood.* 1991; 77(9):1876-1883. (Immunogen: Blocking, Flow cytometry, Functional assay, Inhibition, Radioimmunoassay)

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