

Technical Data Sheet

BV421 Rat Anti-Mouse CD135

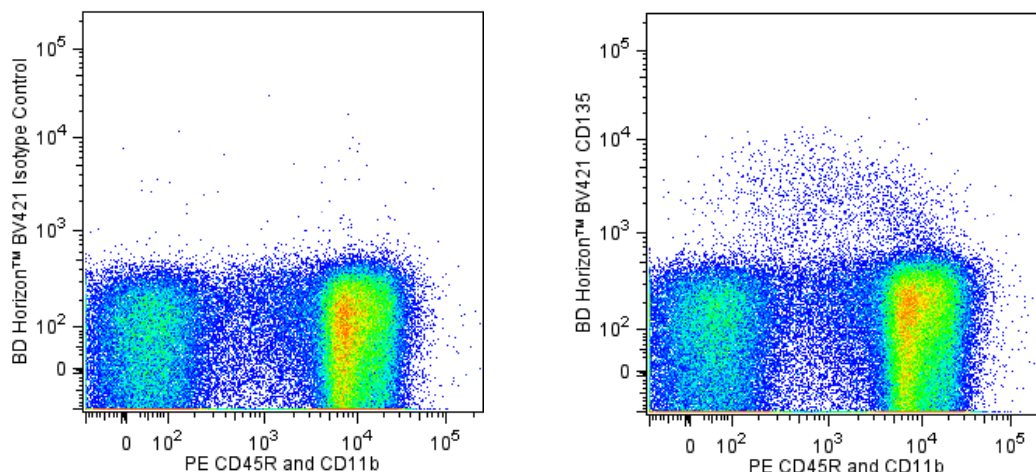
Product Information

Material Number:	562898
Alternate Name:	Flt3; Fms-like tyrosine kinase 3; FLT-3; FLK-2; Fetal liver kinase 2; Ly72
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	A2F10.1
Immunogen:	Mouse Flt-3 Transfected Cell Line
Isotype:	Rat (WI) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The A2F10 monoclonal antibody specifically binds to Flk-2/Flt3 (Ly-72, CD135), a receptor protein tyrosine kinase closely related to c-kit, c-fms, and PDGF Receptor of the immunoglobulin superfamily. The *Flt3* message is detected in hematopoietic stem cells and primitive progenitor cells in fetal liver, adult bone marrow, and fetal and adult thymus, as well as brain, placenta, and testis; but it is absent in more mature hematopoietic cells. In flow cytometric analysis, the A2F10 antibody recognizes *Flt3*-transfected Y3 cells (rat myeloma), but not the parent cell line in addition to recognizing early B lymphoid lineage cells in juvenile and adult bone marrow. A role for CD135 in the regulation of hematopoiesis is suggested by the observations that soluble Flk-2/Flt3 ligand can both stimulate proliferation of stem cell-enriched fetal liver, fetal thymus, and adult bone marrow populations and enhance their responses to other growth factors *in vitro*. In addition, injection of Flk-2/Flt3 ligand stimulates extramedullary hematopoiesis in the mouse spleen and accumulation of dendritic cells in the hematopoietic system. mAb A2F10.1 is reported to immunoprecipitate a 150-kDa surface protein from the murine myeloblast cell line M1, which naturally expresses CD135, and to inhibit the binding of Flk-2/Flt3 ligand to CD135.

The antibody was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Multicolor flow cytometric analysis of CD135 expression on mouse bone-marrow leukocytes. BALB/c mouse bone-marrow cells were stained with PE Rat Anti-Mouse CD45R/B220 (Cat. No. 553090/553089/561878) and PE Rat Anti-Mouse CD11b (Cat. No. 553311/557397/561689) antibodies and with either BD Horizon™ BV421 Rat IgG2a, κ Isotype Control (Cat. No. 562602, Left Panel) or BD Horizon™ BV421 Rat Anti-Mouse CD135 antibody (Cat. No. 562898, Right Panel). Two-color flow cytometric dot plots show the correlated expression patterns of CD135 (or Ig Isotype control staining) versus CD45R/B220 and CD11b for gated events with the forward and side light-scatter characteristics of viable bone marrow cells. Flow cytometry was performed using a BD LSR™ II Flow Cytometry 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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

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Application Notes

Application

Flow cytometry

Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562602	BV421 Rat IgG2a, κ Isotype Control	50 μ g	R35-95
554656	Stain Buffer (FBS)	500 ml	(none)
553090	PE Rat Anti-Mouse CD45R/B220	0.2 mg	RA3-6B2
553089	PE Rat Anti-Mouse CD45R/B220	0.1 mg	RA3-6B2
561878	PE Rat Anti-Mouse CD45R/B220	25 μ g	RA3-6B2
553311	PE Rat Anti-Mouse CD11b	0.2 mg	M1/70
557397	PE Rat Anti-Mouse CD11b	0.1 mg	M1/70
561689	PE Rat Anti-Mouse CD11b	25 μ g	M1/70

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

References

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