

Technical Data Sheet

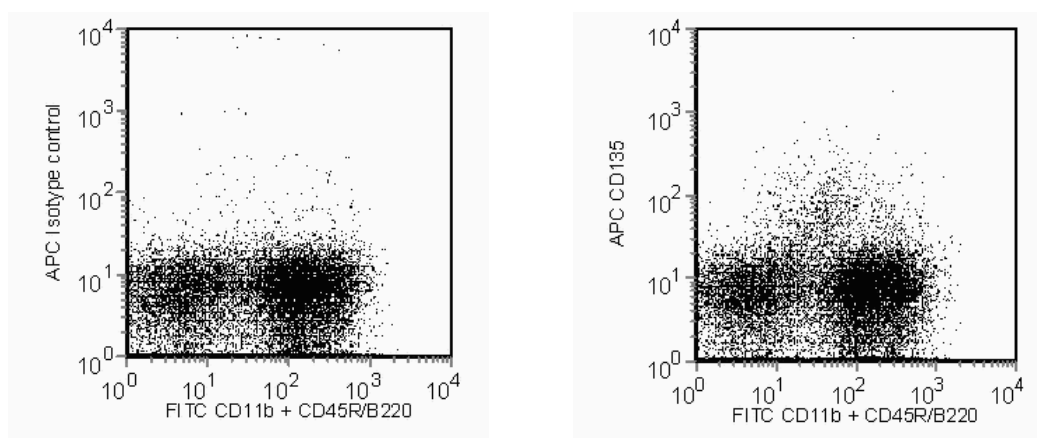
APC Rat Anti-Mouse CD135

Product Information

Material Number:	560718
Alternate Name:	FLK-2/Flt3, Ly-72
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 ≤0.09% sodium azide.

Description

The A2F10 antibody reacts with 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.

**Flow cytometric analysis of CD135 on mouse bone marrow cells.**

Bone marrow cells from BALB/c mice were stained with FITC Rat Anti-Mouse CD11b (Cat. No. 553310) and FITC Rat Anti-Mouse CD45R/B220 (Cat. No. 553088) in conjunction with either a APC Rat IgG2a, κ isotype control (left panel) or with the APC Rat Anti-Mouse CD135 antibody (right panel). Dot plots were derived from gated events based on light scattering characteristics for bone marrow cells. Flow cytometry was performed on 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 to APC under optimum conditions, and unconjugated antibody and free APC were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
----------------	------------------

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD



Suggested Companion Products

Catalog Number	Name	Size	Clone
553932	APC Rat IgG2a κ Isotype Control	0.1 mg	R35-95
553310	FITC Rat Anti-Mouse CD11b	0.5 mg	M1/70
553088	FITC Rat Anti-Mouse CD45R/B220	0.5 mg	RA3-6B2
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

Hannum C, Culppepper J, Campbell D, et al. Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth of haematopoietic stem cells and is encoded by variant RNAs. *Nature*. 1994; 368(2):643-648. (Biology)

Lyman SD, James L, Vanden Bos T, et al. Molecular cloning of a ligand for the flt3/flk-2 tyrosine kinase receptor: a proliferative factor for primitive hematopoietic cells. *Cell*. 1993; 75(6):1157-1167. (Biology)

Matthews W, Jordan CT, Wiegand GW, Pardoll D, Lemischka IR. A receptor tyrosine kinase specific to hematopoietic stem and progenitor cell-enriched populations. *Cell*. 1991; 65(7):1143-1152. (Biology)

Ogawa M, Sugawara S, Kunisada T, et al. Flt3/Flk-2 and c-Kit are not essential for the proliferation of B lymphoid progenitor cells in the bone marrow of the adult mouse. *Exp Hematol*. 1998; 26(6):478-488. (Immunogen)

Ogawa M, ten Boekel E, Melchers F. Identification of CD19(-)B220(+)c-Kit(+)Flt3/Flk-2(+) cells as early B lymphoid precursors before pre-B-I cells in juvenile mouse bone marrow. *Int Immunol*. 2000; 12(3):313-324. (Biology)

Orlic D, Fischer R, Nishikawa S, Nienhuis AW, Bodine D. Purification and characterization of heterogeneous pluripotent hematopoietic stem cell populations expressing high levels of c-kit receptor. *Blood*. 1993; 82(3):762-770. (Biology)

Shurin MR, Pandharipande PP, Zorina TD, et al. FLT3 ligand induces the generation of functionally active dendritic cells in mice. *Cell Immunol*. 1997; 179(2):174-184. (Biology)

Veiby OP, Jacobsen FW, Cui L, Lyman SD, Jacobsen SE. The flt3 ligand promotes the survival of primitive hemopoietic progenitor cells with myeloid as well as B lymphoid potential. Suppression of apoptosis and counteraction by TNF-alpha and TGF-beta. *J Immunol*. 1996; 157(7):2953-2960. (Biology)

Veiby OP, Lyman SD, Jacobsen SE. Combined signaling through interleukin-7 receptors and flt3 but not c-kit potently and selectively promotes B-cell commitment and differentiation from uncommitted murine bone marrow progenitor cells. *Blood*. 1996; 88(4):1256-1265. (Biology)

Wasserman R, Li YS, Hardy RR. Differential expression of the blk and ret tyrosine kinases during B lineage development is dependent on Ig rearrangement. *J Immunol*. 1995; 155(2):644-651. (Biology)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD

