

## Technical Data Sheet

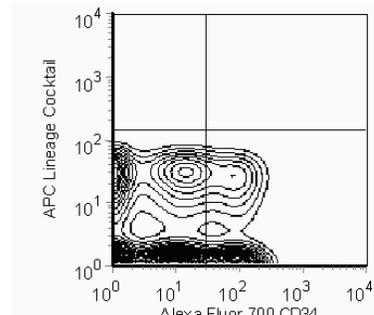
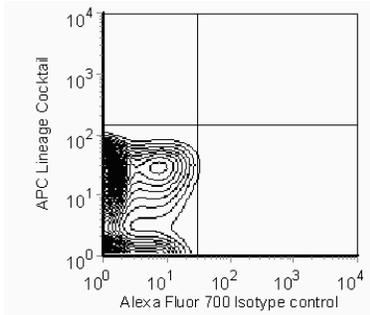
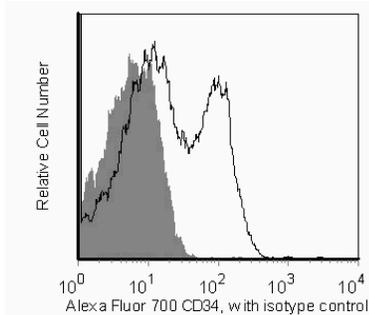
## Alexa Fluor® 700 Rat Anti-Mouse CD34

## Product Information

Material Number:	560518
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	RAM34
Immunogen:	Recombinant Mouse CD34
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

## Description

The RAM34 antibody reacts with the CD34 glycoprotein on the surface of three independently derived mouse CD34-transfected cell lines. RAM34 antibody also reacts with the mouse cell lines PA6, 416B, Swiss 3T6, NIH, 3T3, DA1, and M1, all of which are positive for expression of mouse CD34 mRNA. Cell lines shown to be negative for CD34 transcript, including WEHI-3B, EL4, 18.8, and CMT64/61, are also negative for surface expression of CD34 as determined by RAM34 staining. Normal thymocytes and splenocytes are negative for CD34 expression. In the bone marrow, 7-10% of cells are stained with RAM34 mAb, including most of the Ly-6A/E (Sca-1)+ CD90 (Thy-1)low Lineage Marker- hematopoietic stem cell-enriched subpopulation and myeloerythroid progenitors. CD34 is also expressed on a small percentage of fetal liver cells, including NK-cell progenitors. CD34 has been reported to be expressed on the endothelium of capillaries and, in this form, to function as a ligand for L-selectin. Consistent with this observation, RAM34 antibody stains endothelial cells in spleen, thymus, and postcapillary HEVs in the lymph nodes. It is reported that RAM34 antibody can be used to select CD34+ CD117 (c-Kit)+ Ly-6A/E (Sca-1)+ Lineage Marker- bone marrow-derived hematopoietic stem cells, capable of short-term multi-lineage reconstitution of lethally irradiated mice; while the CD34- CD117+ Sca-1+ Lineage Marker- population contains self-renewing hematopoietic stem cells. Similarly, the bone marrow population with high dye-efflux capacity and which is highly enriched for long-term reconstituting hematopoietic stem cells is CD34- CD117 (c-Kit)+ Ly-6A/E (Sca-1)+ Lineage Marker-.



**Flow cytometric analysis for CD34 in mouse bone marrow.** BALB/c bone marrow cells were treated with Mouse BD Fc Block™ (Purified Rat Anti-Mouse CD16/CD32 mAb 2.4G2 (Cat. No. 553141)) and stained with either the Alexa Fluor® 700 Rat Anti-Mouse CD34 antibody (left and right panels) or a Alexa Fluor® 700 Rat IgG2a, κ isotype control (left and middle panels), followed by staining with an APC Lineage Cocktail (Cat. No. 558074) to identify major lineage committed cells. Histogram and contour plots were derived from the gated events based on the light scattering characteristics of leukocytes and fluorescence characteristics of the CD34 and Lineage markers. 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 Alexa Fluor® 700 under optimum conditions, and unreacted Alexa Fluor® 700 was removed.

## Application Notes

## Application

Flow cytometry	Routinely Tested
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## Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
557963	Alexa Fluor® 700 Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
558074	APC Mouse Lineage Antibody Cocktail, with Isotype Control	100 tests	(none)
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. Alexa Fluor® 700 has an adsorption maximum of ~700nm and a peak fluorescence emission of ~720nm. Before staining cells with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
8. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

## References

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