

Technical Data Sheet

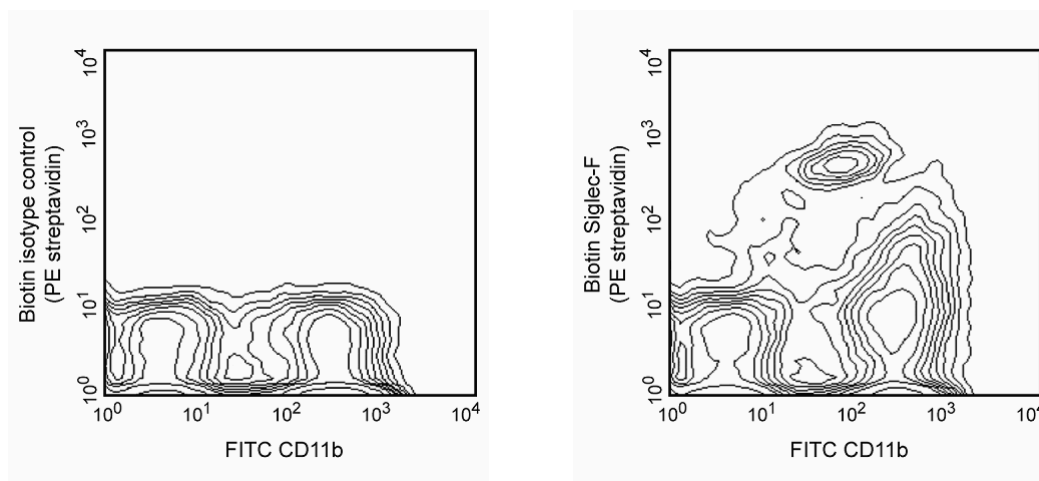
Purified Rat Anti-Mouse Siglec-F

Product Information

Material Number:	552125
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	E50-2440
Immunogen:	Mouse Siglec-F and human IgG Fc recombinant fusion protein
Isotype:	Rat (LOU) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The E50-2440 antibody reacts with Siglec-F, the sixth siglec protein to be reported in the mouse. Siglecs are the sialic acid-binding immunoglobulin superfamily *lectins* defined in the human, each of which has a distinctive expression pattern in the hematopoietic system and at least some of which are known to mediate cell-cell interactions. Orthologous proteins of human Siglec-1 (Sialoadhesin or CD169), Siglec-2 (CD22), and Siglec-4 (myelin-associated glycoprotein) have been characterized in the mouse. Human Siglec-3 (CD33) and Siglecs-5 through -10 are encoded by a cluster of closely related genes, and each has two cytoplasmic ITIM (*Immunoreceptor Tyrosine-based Inhibitory Motifs*). Similarly, mouse Siglec-F is encoded by a gene in a syntenic cluster in the mouse, and the protein has sialic acid-binding activity and an intracytoplasmic ITIM. Its expression pattern differs from those of the human Siglec-3-related proteins in that it is found on immature cells of the myelomonocytic lineage, with reduced expression on mature neutrophils and monocytes, and not on lymphoid cells. It has been proposed that mAb E50-2440 may be used for identification of immature myelomonocytic cells in the mouse.



Two-color analysis of Siglec-F expression on bone-marrow myeloid cells. BALB/c bone-marrow leukocytes were stained with either purified rat IgG2a, κ isotype control mAb R35-95 (Cat. No. 553927, left panel) or purified mAb E50-2440 (right panel) in the presence of Mouse Fc Block™ (purified anti-mouse CD16/CD32 mAb 2.4G2, Cat. No. 553141/553142), followed by biotinylated anti-rat IgG2a mAb RG7/1.30 (Cat. No. 553894), then Streptavidin-PE (Cat. No. 554061) and FITC-conjugated anti-mouse CD11b (Integrin αM chain) mAb M1/70 (Cat. No. 557396/553310). Flow cytometry was performed on a FACSCalibur™ (BD Biosciences, San Jose, CA).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

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Application Notes

Application

Flow cytometry	Routinely Tested
ELISA	Reported
Immunofluorescence	Reported
Immunohistochemistry-frozen	Reported

Recommended Assay Procedure:

Mouse Fc Block™ (purified anti-mouse CD16/CD32 mAb 2.4G2, Cat. No. 553141/553142) may help to reduce non-specific binding to cells bearing Fcγ receptors. If Mouse Fc Block™ is used, then it is important that the second-step anti-rat IgG antibody does not cross-react with the 2.4G2 mAb (rat IgG2b, κ); we recommend use of biotinylated or FITC-conjugated anti-rat IgG2a mAb RG7/1.30 (Cat. No. 553894 or 553896, respectively).

Suggested Companion Products

Catalog Number	Name	Size	Clone
553927	Purified Rat IgG2a, κ Isotype Control	0.5 mg	R35-95
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553894	Biotin Mouse Anti-Rat IgG2a	0.5 mg	RG7/1.30
554061	PE Streptavidin	0.5 mg	(none)
557396	FITC Rat Anti-Mouse CD11b	0.1 mg	M1/70

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
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.

References

Angata T, Hingorani R, Varki NM, Varki A. Cloning and characterization of a novel mouse Siglec, mSiglec-F: differential evolution of the mouse and human (CD33) Siglec-3-related gene clusters. *J Biol Chem.* 2001; 276(48):45128-45136.(Immunogen: ELISA, Immunofluorescence, Immunohistochemistry)
Crocker PR, Varki A. Siglecs, sialic acids and innate immunity. *Trends Immunol.* 2001; 22(6):337-342.(Biology)