

## Technical Data Sheet

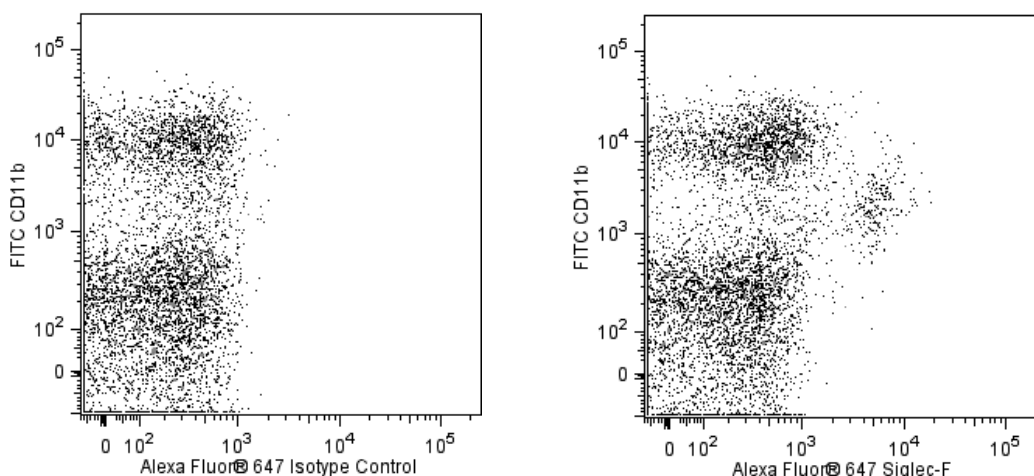
## Alexa Fluor® 647 Rat Anti-Mouse Siglec-F

## Product Information

<b>Material Number:</b>	<b>562680</b>
<b>Alternate Name:</b>	Siglec5; sialic acid binding Ig-like lectin 5; SIGL5; Siglec-5; CD170
<b>Size:</b>	50 µg
<b>Concentration:</b>	0.2 mg/ml
<b>Clone:</b>	E50-2440
<b>Immunogen:</b>	Mouse Siglec-F and human IgG Fc recombinant fusion protein
<b>Isotype:</b>	Rat (LOU) IgG2a, κ
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing ≤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 (*I*mmunoreceptor *T*yrosine-based *I*nhibitory *M*otifs). 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.



**Multicolor flow cytometric analysis of Siglec-F expression on BALB/c mouse bone marrow cells.** Bone marrow cells were stained with FITC Rat Anti-Mouse CD11b antibody (Cat. No. 553310/557396/561688) and either Alexa Fluor® 647 Rat IgG2a, κ Isotype Control (Cat. No. 557690; Left Panel) or Alexa Fluor® 647 Rat Anti-Mouse Siglec-F antibody (Cat. No. 562680; Right Panel) in the presence of Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™; Cat. No. 553141/553142). Two-color flow cytometric dot plots show the correlated expression patterns of Siglec-F (or Ig isotype control staining) versus 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 Cytometer 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® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

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## Application Notes

### Application

Flow cytometry

Routinely Tested

### Suggested Companion Products

Catalog Number	Name	Size	Clone
557690	Alexa Fluor® 647 Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
554656	Stain Buffer (FBS)	500 ml	(none)
553310	FITC Rat Anti-Mouse CD11b	0.5 mg	M1/70
557396	FITC Rat Anti-Mouse CD11b	0.1 mg	M1/70
561688	FITC Rat Anti-Mouse CD11b	25 µg	M1/70
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 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. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
4. 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.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).

### 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: Flow cytometry, Fluorescence activated cell sorting, Immunofluorescence, Immunohistochemistry)

Crocker PR, Varki A. Siglecs, sialic acids and innate immunity. *Trends Immunol*. 2001; 22(6):337-342. (Biology)

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