SONY

Product Data Sheet

PE/Cy7 anti-Siglec-E

Catalog # / Size: 3985535 / 25 µg
3985540 / 100 µg

Clone: M1304A01

Isotype: Rat IgG2a, κ

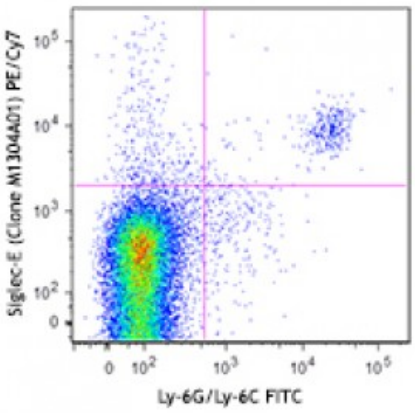
Immunogen: Recombinant mouse Siglec-E produced in the HEK293A cell line.

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with PE/Cy7 under optimal conditions. The solution is free of unconjugated PE/Cy7 and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.2



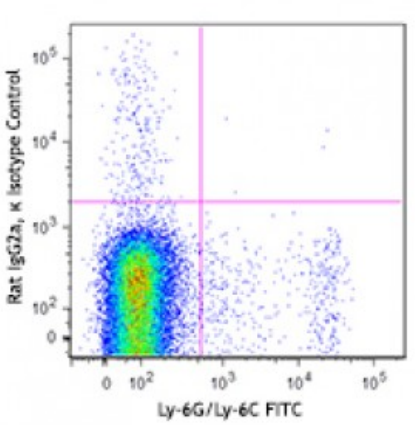
C57BL/6 mouse splenocytes were stained with Ly-6G/Ly-6C (clone Gr-1) FITC and Siglec-E (clone M1304A01) PE/Cy7 (top) or rat IgG2a, κ PE/Cy7 isotype control (bottom).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.125 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: This antibody works for western blotting under non-reducing conditions.



Application References:
1. Siddiqui S, *et. al*. 2017. *J. Biol. Chem*. 292: 1029.

Description: Siglecs (sialic acid binding Ig-like lectins) are type I membrane proteins with an extracellular region containing a sialic acid binding V-set Ig-like domain at the N-terminus, followed by varying numbers of C2-set Ig domains. The cytoplasmic tails of all siglecs have tyrosine based motifs with a signaling function. Siglecs are widely expressed on hematopoietic cells, often in a cell-type-specific manner. Their ligands, sialic acids, are negatively charged monosaccharides found on cell-surface glycoproteins and glycolipids. Studies suggest that siglecs may participate in cell-cell interactions or act as receptors for the entry of viral or bacterial pathogens. In addition, the presence of immunoreceptor tyrosine-based inhibitory motifs (ITIM) in their cytoplasmic domain indicates that these molecules may play a role in the suppression of immunoreceptor signaling. Siglec-E is a mouse CD33-related siglec that selectively regulates early recruitment of neutrophils to the lung in acute lung inflammation induced by lipopolysaccharide. Siglec E-deficient mice exhibit exaggerated neutrophil recruitment that is

reversible by using a blockade of the β2 integrin, CD11b. In addition, sialidase treatment of fibrinogen reverses the suppressive effect of Siglec-E on CD11b signaling. This suggests that sialic acid recognition by Siglec-E is required for its inhibitory function. These findings indicate that Siglec-E is an important negative regulator of neutrophil recruitment to the lungs and β2 integrin-dependent signaling.

Antigen References:

1. McMillan SJ, *et al.* 2013. *Blood* 121:2084.
2. Bax M, *et al.* 2010. *Ann. Rheum. Dis.* 69:42.
3. Angata T and Varki A. 2000. *J. Biol. Chem.* 275:22127.
4. Zhang JQ, *et al.* 2004. *Eur.*