

**AM60041RP-N****Monoclonal Antibody to SIGLEC5 / SIGLEC14 - PE**

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| <b>Alternate names:</b>              | CD170, O15389, Q08ET2, Sialic acid-binding Ig-like lectin 14, Sialic acid-binding Ig-like lectin 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Quantity:</b>                     | 100 Tests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Background:</b>                   | <p>Siglec-5 shares an almost identical sequence with Siglec-14 within the first two Ig-like domains, indicating partial gene conversion between these two Siglecs, also evident in other primate species.</p> <p>Siglec-5, also known as CD170, is a sialic-acid-binding Ig-like lectin, and member of the Ig superfamily, expressed by dendritic cells (DCs), activated macrophages, neutrophils, and cells of the monocyte/myeloid lineage. Highly related to the myelomonocytic-derived adhesion molecule CD33 (Siglec-3), Siglec-5 mediates sialic-acid dependent binding to cells, and is as well acting as an inhibitory receptor in the down-regulation of cell activation. Structurally, Siglec-5 contains an immunoreceptor tyrosine-based inhibitor motif (ITIM), which plays a part in the modulation of cellular responses, and when phosphorylated, can bind to the SH2 domain of several SH2-containing phosphatases.</p> <p>Siglec-14 is a putative sialic-acid binding adhesion molecule and predominantly expressed in hematopoietic tissues, which have been shown to associate with the activating adapter protein DAP12.</p> |
| <b>Host / Isotype:</b>               | Mouse / IgG1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Recommended Isotype Controls:</b> | SM10R (for use in human samples), AM03095PU-N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Clone:</b>                        | 1A5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Immunogen:</b>                    | SIGLEC5-Fc protein, consisting of the full-length extracellular region of human SIGLEC5, fused with the Fc region of human IgG1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Format:</b>                       | <p><b>State:</b> Lyophilised purified IgG</p> <p><b>Purification:</b> Affinity chromatography on Protein G</p> <p><b>Buffer System:</b> PBS containing 0.09% Sodium azide, 1% BSA and 5% Sucrose</p> <p><b>Label:</b> PE – R. Phycoerythrin</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Applications:</b>                 | <p><b>Flow cytometry:</b> Neat, use 10µl to label 10e6 cells in 100µl.</p> <p>Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Specificity:</b>                  | This antibody recognises human SIGLEC5 / CD170. Clone 1A5 antibody is one of several SIGLEC5 antibodies which also recognises human SIGLEC14 ( <i>Angata, T. et al., 2006</i> ).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species Reactivity:</b>           | <p><b>Tested:</b> Human</p> <p><b>Expected from sequence similarity:</b> Chimpanzee (<i>Nguyen, D.H. et al., 2006</i>)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Storage:**

Prior to and following reconstitution store the antibody at 2-8°C.

**DO NOT FREEZE!**

This product is photosensitive and should be protected from light.

Shelf life: one year from despatch.

**General Readings:**

1. Cornish AL, Freeman S, Forbes G, Ni J, Zhang M, Cepeda M, et al. Characterization of siglec-5, a novel glycoprotein expressed on myeloid cells related to CD33. *Blood*. 1998 Sep 15;92(6):2123-32. PubMed PMID: 9731071.
2. Avril T, Freeman SD, Attrill H, Clarke RG, Crocker PR. Siglec-5 (CD170) can mediate inhibitory signaling in the absence of immunoreceptor tyrosine-based inhibitory motif phosphorylation. *J Biol Chem*. 2005 May 20;280(20):19843-51. Epub 2005 Mar 15. PubMed PMID: 15769739.
3. Nguyen DH, Hurtado-Ziola N, Gagneux P, Varki A. Loss of Siglec expression on T lymphocytes during human evolution. *Proc Natl Acad Sci U S A*. 2006 May 16;103(20):7765-70. Epub 2006 May 8. PubMed PMID: 16682635.
4. Jaroenpool J, Rogers KA, Pattanapanyasat K, Villinger F, Onlamoon N, Crocker PR, et al. Differences in the constitutive and SIV infection induced expression of Siglecs by hematopoietic cells from non-human primates. *Cell Immunol*. 2007 Nov-Dec;250(1-2):91-104. doi: 10.1016/j.cellimm.2008.01.009. Epub 2008 Mar 10. PubMed PMID: 18331725.
5. Angata T, Hayakawa T, Yamanaka M, Varki A, Nakamura M. Discovery of Siglec-14, a novel sialic acid receptor undergoing concerted evolution with Siglec-5 in primates. *FASEB J*. 2006 Oct;20(12):1964-73. PubMed PMID: 17012248.

**Pictures:**

Human peripheral blood monocytes stained with SIGLEC5 / SIGLEC14 antibody Cat.-No. AM60041RP-N.

