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SM2135R Monoclonal Antibody to CD52 / CAMPATH-1 - PE

Alternate names:	CDw52, Cambridge pathology 1 antigen, Epididymal secretory protein E5, HE5
Quantity:	100 Tests
Background:	CD52 is a small peptide that is heavily glycosylated, and attached to the cell surface membrane via a GPI link (Xia et al. 1991). The apparent molecular mass of the native antigen on SDS-PAGE is 25-29kDa, considerably reduced following N-glycanase treatment (Rowan et al. 1998). CD52 is expressed at high density by lymphocytes, monocytes, eosinophils, thymocytes and macrophages. It is expressed by most lymphoid derived malignancies, although expression on myeloma cells is variable. Humanised versions of CAMPATH-1 specific antibodies are currently in clinical trials for the treatment of a range of lymphoid malignancies (Dearden et al. 2002; Pettitt et al. 2012).
Uniprot ID:	P31358
NCBI:	NP_001794.2
GeneID:	1043
Host / Isotype:	Rat / IgG2b
Recommended Isotype Controls:	SM19R
Clone:	YTH34.5
Immunogen:	Human lymphocytes.
Format:	**State:** Lyophilized purified Ig fraction from Tissue Culture Supernatant **Purification:** Affinity Chromatography on Protein A **Buffer System:** PBS **Preservatives:** 0.09% Sodium Azide **Stabilizers:** 1% BSA **Label:** PE – R. Phycoerythrin (RPE) **Reconstitution:** Restore with 1 ml distilled water.
Applications:	**Flow Cytometry:** Use 10 µl of neat antibody to label 1 x 10e6 cells. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody CD52 antibody, clone YTH34.5 reacts with the Human CD52 antigen, also known as CAMPATH-1. **Species:** Human, Rhesus Monkey. Other species not tested.
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. Hale G, Zhang MJ, Bunjes D, Prentice HG, Spence D, Horowitz MM, et al. Improving the outcome of bone marrow transplantation by using CD52 monoclonal antibodies to prevent graft-versus-host disease and graft rejection. Blood. 1998 Dec 15;92(12):4581-90. PubMed PMID: 9845524.
2. Salisbury JR, Rapson NT, Codd JD, Rogers MV, Nethersell AB. Immunohistochemical analysis of CDw52 antigen expression in non-Hodgkin's lymphomas. J Clin Pathol. 1994 Apr;47(4):313-7. PubMed PMID: 8027367.
3. Rodig SJ, Abramson JS, Pinkus GS, Treon SP, Dorfman DM, Dong HY, et al. Heterogeneous CD52 expression among hematologic neoplasms: implications for the use of alemtuzumab (CAMPATH-1H). Clin Cancer Res. 2006 Dec 1;12(23):7174-9. PubMed PMID: 17145843.
4. Haniffa M, Ginhoux F, Wang XN, Bigley V, Abel M, Dimmick I, et al. Differential rates of replacement of human dermal dendritic cells and macrophages during hematopoietic stem cell transplantation. J Exp Med. 2009 Feb 16;206(2):371-85. doi: 10.1084/jem.20081633. Epub 2009 Jan 26. PubMed PMID: 19171766.
5. Ratzinger G, Reagan JL, Heller G, Busam KJ, Young JW. Differential CD52 expression by distinct myeloid dendritic cell subsets: implications for alemtuzumab activity at the level of antigen presentation in allogeneic graft-host interactions in transplantation. Blood. 2003 Feb 15;101(4):1422-9. Epub 2002 Oct 10. PubMed PMID: 12393688.
6. Hu Y, Turner MJ, Shields J, Gale MS, Hutto E, Roberts BL, et al. Investigation of the mechanism of action of alemtuzumab in a human CD52 transgenic mouse model. Immunology. 2009 Oct;128(2):260-70. doi: 10.1111/j.1365-2567.2009.03115.x. PubMed PMID: 19740383.
7. Golay J, Cortiana C, Manganini M, Cazzaniga G, Salvi A, Spinelli O, et al. The sensitivity of acute lymphoblastic leukemia cells carrying the t(12;21) translocation to campath-1H-mediated cell lysis. Haematologica. 2006 Mar;91(3):322-30. PubMed PMID: 16531255.
8. Klangsinsirikul P, Carter GI, Byrne JL, Hale G, Russell NH. Campath-1G causes rapid depletion of circulating host dendritic cells (DCs) before allogeneic transplantation but does not delay donor DC reconstitution. Blood. 2002 Apr 1;99(7):2586-91. PubMed PMID: 11895797.
9. Piccaluga PP, Agostinelli C, Righi S, Zinzani PL, Pileri SA. Expression of CD52 in peripheral T-cell lymphoma. Haematologica. 2007 Apr;92(4):566-7. PubMed PMID: 17488672.
10. Gopcsa L, Banyai A, Jakab K, Kormos L, Tamaska J, Matolcsy A, et al. Extensive flow cytometric characterization of plasmacytoid dendritic cell leukemia cells. Eur J Haematol. 2005 Oct;75(4):346-51. PubMed PMID: 16146542.
11. Chang ST, Lu CL, Chuang SS. CD52 expression in non-mycotic T- and NK/T-cell lymphomas. Leuk Lymphoma. 2007 Jan;48(1):117-21. PubMed PMID: 17325855.
12. Westermann J, Maschmeyer G, van Lessen A, Dörken B, Pezzutto A. CD52 is not a promising immunotherapy target for most patients with multiple myeloma. Int J Hematol. 2005 Oct;82(3):248-50. PubMed PMID: 16207599.
13. Reimer P, Rüdiger T, Geissinger E, Weissinger F, Nerl C, Schmitz N, et al. Autologous stem-cell transplantation as first-line therapy in peripheral T-cell lymphomas: results of a prospective multicenter study. J Clin Oncol. 2009 Jan

1;27(1):106-13. doi: 10.1200/JCO.2008.17.4870. Epub 2008 Nov 24. PubMed PMID: 19029417.
14. Zand MS, Bose A, Vo T, Coppage M, Pellegrin T, Arend L, et al. A renewable source of donor cells for repetitive monitoring of T- and B-cell alloreactivity. Am J Transplant. 2005 Jan;5(1):76-86. PubMed PMID: 15636614.
15. Rizzo K, Stetler-Stevenson M, Wilson W, Yuan CM. Novel CD19 expression in a peripheral T cell lymphoma: A flow cytometry case report with morphologic correlation. Cytometry B Clin Cytom. 2009 Mar;76(2):142-9. doi: 10.1002/cyto.b.20442. PubMed PMID: 18671252.
16. Miles RR, Cairo MS, Satwani P, Zwick DL, Lones MA, Sposto R, et al. Immunophenotypic identification of possible therapeutic targets in paediatric non-Hodgkin lymphomas: a children's oncology group report. Br J Haematol. 2007 Aug;138(4):506-12. PubMed PMID: 17659054.
17. Bisig, B. et al. (2013) Molecular and phenotypic features are shared by CD30-positive peripheral T-cell lymphomas Haematologica May 28. [Epub ahead of print]

Pictures:

Staining of human peripheral blood lymphocytes with rat anti human CD52-PE (SM2135R).