

Datasheet: MCA1642T

Description:	RAT ANTI HUMAN CD52
Specificity:	CD52
Other names:	CAMPATH-1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	YTH34.5
Isotype:	IgG2b
Quantity:	20 µg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/20
Immunohistology - Frozen	▪			1/20
Immunohistology - Paraffin	▪			1/20
Immunohistology - Resin	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Human

Species Cross Reactivity

Reacts with: Rhesus Monkey

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers	<0.1% sodium azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Human lymphocytes
External Database Links	<p>UniProt: P31358 Related reagents</p> <p>Entrez Gene: 1043 CD52 Related reagents</p>
Synonyms	CDW52, HE5
RRID	AB_324303
Specificity	<p>Rat anti Human CD52 antibody, clone YTH34.5 recognizes the human CD52 antigen, also known as CAMPATH-1. The CD52 antigen is a remarkably small but heavily glycosylated peptide attached to the cell surface membrane via a GPI link (Xia <i>et al.</i> 1991).</p> <p>The apparent molecular mass of the native antigen on SDS-PAGE is 25-29 kDa, considerably reduced following N-glycanase treatment (Rowan <i>et al.</i> 1998).</p> <p>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.</p> <p>Humanized versions of CAMPATH-1 specific antibodies are currently in clinical trials for the treatment of a range of lymphoid malignancies (Dearden <i>et al.</i> 2002; Pettitt <i>et al.</i> 2012).</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 1 x 10 ⁶ cells in 100µl
Histology Positive Control Tissue	Human tonsil
References	<ol style="list-style-type: none"> 1. Klangsinsirikul, P. <i>et al.</i> (2002) Campath-1G causes rapid depletion of circulating host dendritic cells (DCs) before allogeneic transplantation but does not delay donor DC reconstitution. Blood. 99: 2586-91. 2. Ratzinger, G. <i>et al.</i> (2003) 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. 101: 1422-9. 3. Zand, M.S. <i>et al.</i> (2005) A renewable source of donor cells for repetitive monitoring of T- and B-cell alloreactivity. Am J Transplant. 5: 76-86. 4. Westermann, J <i>et al.</i> (2005) CD52 Is Not a Promising Immunotherapy Target for Most

- Patients with Multiple Myeloma [International Journal of Hematology. 82 \(3\): 248-50.](#)
5. Gopcsa, L. *et al.* (2005) Extensive flow cytometric characterization of plasmacytoid dendritic cell leukemia cells. [Eur J Haematol. 75: 346-51.](#)
 6. Rodig SJ *et al.* (2006) Heterogeneous CD52 expression among hematologic neoplasms: implications for the use of alemtuzumab (CAMPATH-1H). [Clin Cancer Res. 12 \(23\): 7174-9.](#)
 7. Golay, J. *et al.* (2006) The sensitivity of acute lymphoblastic leukemia cells carrying the t(12;21) translocation to campath-1H-mediated cell lysis. [Haematologica. 91: 322-30.](#)
 8. Miles, R.R. *et al.* (2007) Immunophenotypic identification of possible therapeutic targets in paediatric non-Hodgkin lymphomas: a children's oncology group report. [Br J Haematol. 138: 506-12.](#)
 9. Chang, S.T. *et al.* (2007) CD52 expression in non-mycotic T- and NK/T-cell lymphomas. [Leuk Lymphoma. 48: 117-21.](#)
 10. Piccaluga, P.P. *et al.* (2007) Expression of CD52 in peripheral T-cell lymphoma. [Haematologica. 92: 566-7.](#)
 11. Reimer, P. *et al.* (2009) Autologous stem-cell transplantation as first-line therapy in peripheral T-cell lymphomas: results of a prospective multicenter study. [J Clin Oncol. 27: 106-13.](#)
 12. Hu, Y. *et al.* (2009) Investigation of the mechanism of action of alemtuzumab in a human CD52 transgenic mouse model. [Immunology. 128: 260-70.](#)
 13. Rizzo, K. *et al.* (2009) Novel CD19 expression in a peripheral T cell lymphoma: A flow cytometry case report with morphologic correlation. [Cytometry B Clin Cytom. 76: 142-9.](#)
 14. Haniffa, M. *et al.* (2009) Differential rates of replacement of human dermal dendritic cells and macrophages during hematopoietic stem cell transplantation. [J Exp Med. 206: 371-85.](#)
 15. Bisig, B. *et al.* (2013) CD30-positive peripheral T-cell lymphomas share molecular and phenotypic features. [Haematologica. 98 \(8\): 1250-8.](#)
 16. Paulus, A. *et al.* (2015) Immunophenotyping of Waldenströms macroglobulinemia cell lines reveals distinct patterns of surface antigen expression: potential biological and therapeutic implications. [PLoS One. 10 \(4\): e0122338.](#)
 17. Hotta, R. *et al.* (2016) CD52-Negative NK Cells Are Abundant in the Liver and Less Susceptible to Alemtuzumab Treatment. [PLoS One. 11 \(8\): e0161618.](#)
 18. Buckstein, R. *et al.* (2016) Alemtuzumab and CHOP Chemotherapy for the Treatment of Aggressive Histology Peripheral T Cell Lymphomas: A Multi-Center Phase I Study. [Clin Lymphoma Myeloma Leuk. 16 \(1\): 18-28.e4.](#)
 19. Craig, J.W. *et al.* (2018) Assessment of CD52 expression in "double-hit" and "double-expressor" lymphomas: Implications for clinical trial eligibility. [PLoS One. 13 \(7\): e0199708.](#)

Further Reading

1. Salisbury JR *et al.* (1994) Immunohistochemical analysis of CDw52 antigen expression in non-Hodgkin's lymphomas. [J Clin Pathol. 47 \(4\): 313-7.](#)
2. Hale G *et al.* (1998) Improving the outcome of bone marrow transplantation by using CD52 monoclonal antibodies to prevent graft-versus-host disease and graft rejection. [Blood. 92 \(12\): 4581-90.](#)

Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for

short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee	12 months from date of despatch
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Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1642T 10040
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Regulatory	For research purposes only
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Related Products

Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight@550 , DyLight@650 , DyLight@800
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR16...)	DyLight@800

Recommended Negative Controls

[RAT IgG2b NEGATIVE CONTROL \(MCA6006GA\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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