

Datasheet: MCA1642AMO

Description:	RAT ANTI HUMAN CD52:Amethyst Orange
Specificity:	CD52
Other names:	CAMPATH-1
Format:	Amethyst Orange
Product Type:	Monoclonal Antibody
Clone:	YTH34.5
Isotype:	IgG2b
Quantity:	0.1 mg

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	■			Neat - 1/5

Where this antibody 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 antibody 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.								
Product Form	Purified IgG conjugated to Amethyst Orange - liquid								
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>Amethyst Orange</td> <td>405</td> <td>540</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Amethyst Orange	405	540		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
Amethyst Orange	405	540							
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant								
Buffer Solution	Phosphate buffered saline								
Preservative	0.09% Sodium Azide (NaN ₃)								
Stabilisers	1% Bovine Serum Albumin								
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml								
Immunogen	Human lymphocytes								

**External Database
Links**

UniProt:

[P31358](#) [Related reagents](#)

Entrez Gene:

[1043](#) CD52 [Related reagents](#)

Synonyms

CDW52, HE5

Specificity

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 *et al.* 1991](#)).

The apparent molecular mass of the native antigen on SDS-PAGE is 25-29 kDa, 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.

Humanized 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](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

References

1. Klanginsirikul, P. *et al.* (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. *et al.* (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. *et al.* (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 *et al.* (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.](#)
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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.](#)
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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

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #10041 available at:
10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

[RAT IgG2b NEGATIVE CONTROL:Amethyst Orange \(MCA6006AMO\)](#)

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