

Datasheet: MCA1642

Description:	RAT ANTI HUMAN CD52
Specificity:	CD52
Other names:	CAMPATH-1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	YTH34.5
Isotype:	IgG2b
Quantity:	0.2 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	▪			1/20
Immunohistology - Frozen	▪			1/20
Immunohistology - Paraffin	▪			1/20 - 1/40
Immunohistology - Resin	▪			
ELISA	▪			
Immunoprecipitation	▪			
Western Blotting	▪			
Cytotoxic Assays	▪			50ug/ml (Use human serum as complement source)

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 - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide
Approx. Protein	IgG concentration 1.0 mg/ml

Concentrations

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 reacts with 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 25-29kDa, 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](#)).

Flow Cytometry

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

Histology Positive Control Tissue

Tonsil

References

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3. 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.](#)
4. 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.](#)
5. 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.](#)
6. Hu, Y. *et al.* (2009) Investigation of the mechanism of action of alemtuzumab in a human CD52 transgenic mouse model. [Immunology. 128: 260-70.](#)
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.](#)
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13. 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.](#)
14. 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.](#)
15. 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.](#)
16. 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.](#)
17. Bisig, B. *et al.* (2013) Molecular and phenotypic features are shared by CD30-positive peripheral T-cell lymphomas [Haematologica 98: 1250-8.](#)
18. 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.](#)
19. 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.](#)

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

Shelf Life

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®549 , DyLight®649 , DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

Recommended Negative Controls

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

Recommended Useful Reagents

[HUMAN ANTI ALEMTUZUMAB \(HCA174\)](#)

[HUMAN ANTI ALEMTUZUMAB \(HCA175\)](#)

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