

Datasheet: MCA1033GA

BATCH NUMBER 161961

Description:	RAT ANTI MOUSE CD71
Specificity:	CD71
Other names:	TRANSFERRIN RECEPTOR
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	YTA74.4
Isotype:	IgG2a
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	▪			
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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	Mouse
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide

Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1 mg/ml
Immunogen	Concanavilin A activated mouse spleen cells.
External Database Links	<p>UniProt: Q62351 Related reagents</p> <p>Entrez Gene: 22042 Tfr Related reagents</p>
Synonyms	Tfr
RRID	AB_324703
Fusion Partners	Spleen cells from an immunised DA rat were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.
Specificity	<p>Rat anti Mouse CD71 antibody, clone YTA74.4 recognizes the mouse Transferrin receptor protein 1 also known as CD71 or TfR1. CD71 is a 763 amino acid glycoprotein homodimer of ~95 kDa subunits. CD71 is expressed by dividing cells, and functions as a transferrin receptor mediating uptake of iron.</p> <p>Rat anti Mouse CD71 antibody, clone YTA74.4 blocks the binding of R17 217.1.3. and R17 208.2 anti-TFR monoclonal antibodies (Trowbridge et al. 1982).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 1 x 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> 1. Millot, S. <i>et al.</i> (2010) Erythropoietin stimulates spleen BMP4-dependent stress erythropoiesis and partially corrects anemia in a mouse model of generalized inflammation. Blood. 116: 6072-81. 2. Kuo, Y.M. <i>et al.</i> (2004) Mislocalisation of hephaestin, a multicopper ferroxidase involved in basolateral intestinal iron transport, in the sex linked anaemia mouse. Gut. 53: 201-6. 3. Krysiak, K. <i>et al.</i> (2014) Reduced Levels of Hspa9 Attenuates Stat5 Activation in Mouse B-cells. Exp Hematol. pii: S0301-472X(14)00817-0. 4. Byun, M. <i>et al.</i> (2007) Cowpox virus exploits the endoplasmic reticulum retention pathway to inhibit MHC class I transport to the cell surface. Cell Host Microbe. 2: 306-15. 5. Ripich, T. and Jessberger, R. (2011) SWAP-70 regulates erythropoiesis by controlling α4 integrin. Haematologica. 96: 1743-52. 6. Hadziahmetovic, M. <i>et al.</i> (2012) Microarray analysis of murine retinal light damage reveals changes in iron regulatory, complement, and antioxidant genes in the neurosensory retina and isolated RPE. Invest Ophthalmol Vis Sci. 53 (9): 5231-41. 7. Niewoehner, J. <i>et al.</i> (2014) Increased brain penetration and potency of a therapeutic antibody using a monovalent molecular shuttle. Neuron. 81: 49-60. 8. Sands, S.A. <i>et al.</i> (2015) The habenula and iron metabolism in cerebral mouse models

- of multiple sclerosis. [Neurosci Lett. 606: 204-8.](#)
9. Baumann, B. *et al.* (2017) Conditional Müller Cell Ablation Leads to Retinal Iron Accumulation. [Invest Ophthalmol Vis Sci. 58 \(10\): 4223-34.](#)
10. Nelvagal, H.R. *et al.* (2020) Comparative proteomic profiling reveals mechanisms for early spinal cord vulnerability in CLN1 disease. [Sci Rep. 10 \(1\): 15157.](#)
11. Hargreaves, A. *et al.* (2021) Tumors modulate fenestrated vascular beds and host endocrine status. [J Appl Toxicol. May 11 \[Epub ahead of print\].](#)
12. Zhang, K.R. *et al.* (2022) Conditional knockout of hephaestin in the neural retina disrupts retinal iron homeostasis. [Exp Eye Res. : Mar 07: 109028 \[Epub ahead of print\].](#)
13. Hargreaves, A. *et al.* (2022) Tumours modulate the systemic vascular response to anti-angiogenic therapy. [J Appl Toxicol. Feb 13 \[Epub ahead of print\].](#)

Further Reading	<p>1. Lesley, J. <i>et al.</i> (1984) Expression of transferrin receptor on murine hematopoietic progenitors. Cell Immunol. 83 (1): 14-25.</p> <p>2. Trowbridge, I.S. <i>et al.</i> (1982) Murine cell surface transferrin receptor: studies with an anti-receptor monoclonal antibody. J Cell Physiol. 112 (3): 403-10.</p>
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Storage	<p>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.</p>
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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	<p>Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1033GA 10040</p>
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Regulatory	For research purposes only
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Related Products

Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR73...)	RPE
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
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (STAR69...)	FITC

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL \(MCA1212\)](#)

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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

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