

## Datasheet: MCA1033SBV790

<b>Description:</b>	RAT ANTI MOUSE CD71:StarBright Violet 790
<b>Specificity:</b>	CD71
<b>Other names:</b>	TRANSFERRIN RECEPTOR
<b>Format:</b>	StarBright Violet 790
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	YTA74.4
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	100 TESTS/0.5ml

### 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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.

<b>Target Species</b>	Mouse		
<b>Product Form</b>	Purified IgG conjugated to StarBright Violet 790 - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	StarBright Violet 790	402	782
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20		

<b>Approx. Protein Concentrations</b>	For information on the concentration of our StarBright Dye conjugated reagents please visit our <a href="#">FAQ</a> page.
<b>Immunogen</b>	Concanavalin A activated mouse spleen cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q62351</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">22042</a> Tfr    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Tfr
<b>Fusion Partners</b>	Spleen cells from an immunized DA rat were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.
<b>Specificity</b>	<p><b>Rat anti Mouse CD71 antibody, clone YTA74.4</b> 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 (<a href="#">Trowbridge et al. 1982</a>).</p>
<b>Flow Cytometry</b>	Use 5µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
<b>References</b>	<ol style="list-style-type: none"> <li>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. <a href="#">Blood. 116: 6072-81.</a></li> <li>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. <a href="#">Gut. 53: 201-6.</a></li> <li>3. Krysiak, K. <i>et al.</i> (2015) Reduced levels of Hspa9 attenuate Stat5 activation in mouse B cells. <a href="#">Exp Hematol. 43 (4): 319-30.e10.</a></li> <li>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. <a href="#">Cell Host Microbe. 2: 306-15.</a></li> <li>5. Ripich, T. and Jessberger, R. (2011) SWAP-70 regulates erythropoiesis by controlling α4 integrin. <a href="#">Haematologica. 96: 1743-52.</a></li> <li>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. <a href="#">Invest Ophthalmol Vis Sci. 53 (9): 5231-41.</a></li> <li>7. Niewoehner, J. <i>et al.</i> (2014) Increased brain penetration and potency of a therapeutic antibody using a monovalent molecular shuttle. <a href="#">Neuron. 81: 49-60.</a></li> <li>8. Sands, S.A. <i>et al.</i> (2015) The habenula and iron metabolism in cerebral mouse models of multiple sclerosis. <a href="#">Neurosci Lett. 606: 204-8.</a></li> <li>9. Baumann, B. <i>et al.</i> (2017) Conditional Müller Cell Ablation Leads to Retinal Iron Accumulation. <a href="#">Invest Ophthalmol Vis Sci. 58 (10): 4223-34.</a></li> </ol>

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. 41 \(12\): 1952-65.](#)
12. Zhang, K.R. *et al.* (2022) Conditional knockout of hephaestin in the neural retina disrupts retinal iron homeostasis. [Exp Eye Res. 218: 109028.](#)
13. Hargreaves, A. *et al.* (2022) Tumours modulate the systemic vascular response to anti-angiogenic therapy. [J Appl Toxicol. 42 \(8\): 1371-84.](#)
14. Hargreaves, A. *et al.* (2021) Tumors modulate fenestrated vascular beds and host endocrine status. [J Appl Toxicol. 41 \(12\): 1952-65.](#)

<b>Further Reading</b>	1. Lesley, J. <i>et al.</i> (1984) Expression of transferrin receptor on murine hematopoietic progenitors. <a href="#">Cell Immunol. 83 (1): 14-25.</a> 2. Trowbridge, I.S. <i>et al.</i> (1982) Murine cell surface transferrin receptor: studies with an anti-receptor monoclonal antibody. <a href="#">J Cell Physiol. 112 (3): 403-10.</a>
<b>Storage</b>	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
<b>Guarantee</b>	12 months from date of despatch
<b>Acknowledgements</b>	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20471 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1033SBV790">https://www.bio-rad-antibodies.com/SDS/MCA1033SBV790</a> 20471
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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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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