Datasheet: MCA1033SBV570

Description:	RAT ANTI MOUSE CD71:StarBright Violet 570
Specificity:	CD71
Other names:	TRANSFERRIN RECEPTOR
Format:	StarBright Violet 570
Product Type:	Monoclonal Antibody
Clone:	YTA74.4
Isotype:	IgG2a
Quantity:	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.

	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.

Target Species

Mouse

Product Form

Purified IgG conjugated to StarBright Violet 570 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright Violet 570	404	571

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 (NaN_3)
1% Bovine Serum Albumin
0.1% Pluronic F68
0.1% PEG 3350
0.05% Tween 20

Immunogen	Concanavilin A activated mouse spleen cells.
External Database Links	**UniProt:** Q62351 Related reagents **Entrez Gene:** 22042 Tfrc Related reagents
Synonyms	Trfr
Fusion Partners	Spleen cells from an immunized DA rat were fused with cells of the Y3/Ag1.2.3 rat myeloma cell line.
Specificity	**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. 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).
Flow Cytometry	Use 5µl of the suggested working dilution to label 10^6 cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
References	1. Millot, S. *et al.* (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. *et al.* (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. *et al.* (2015) Reduced levels of Hspa9 attenuate Stat5 activation in mouse B cells. Exp Hematol. 43 (4): 319-30.e10. 4. Byun, M. *et al.* (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. *et al.* (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. *et al.* (2014) Increased brain penetration and potency of a therapeutic antibody using a monovalent molecular shuttle. Neuron. 81: 49-60. 8. Sands, S.A. *et al.* (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. 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.

Further Reading	1. Lesley, J. *et al.* (1984) Expression of transferrin receptor on murine hematopoietic progenitors. Cell Immunol. 83 (1): 14-25. 2. Trowbridge, I.S. *et al.* (1982) Murine cell surface transferrin receptor: studies with an anti-receptor monoclonal antibody. J Cell Physiol. 112 (3): 403-10.
Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA1033SBV570 20471
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

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