

Datasheet: MCA1033F

Description:	RAT ANTI MOUSE CD71:FITC
Specificity:	CD71
Other names:	TRANSFERRIN RECEPTOR
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	YTA74.4
Isotype:	IgG2a
Quantity:	0.1 mg

Product Details

RRID AB_321759

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
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	

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 conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525

Preparation Purified IgG prepared by ion exchange chromatography

Buffer Solution Phosphate buffered saline

Preservative 0.09% Sodium Azide
Stabilisers 1% Bovine Serum Albumin

Approx. Protein Concentrations IgG concentration 0.1 mg/ml

Immunogen Concanavilin A activated mouse spleen cells.

**External Database
Links**

UniProt:

[Q62351](#) [Related reagents](#)

Entrez Gene:

[22042](#) Tfr [Related reagents](#)

Synonyms

Tfr

Fusion Partners

Spleen cells from an immunised 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 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR ([BUF041A/B](#)).

References

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.](#)
3. 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.](#)
4. 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.](#)
5. Krysiak, K. *et al.* (2014) Reduced Levels of Hspa9 Attenuates Stat5 Activation in Mouse B-cells. [Exp Hematol. pii: S0301-472X\(14\)00817-0.](#)
6. 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.](#)
7. Ripich, T. and Jessberger, R. (2011) SWAP-70 regulates erythropoiesis by controlling $\alpha 4$ integrin. [Haematologica. 96: 1743-52.](#)
8. Niewoehner, J. *et al.* (2014) Increased brain penetration and potency of a therapeutic antibody using a monovalent molecular shuttle. [Neuron. 81: 49-60.](#)
9. Sands, S.A. *et al.* (2015) The habenula and iron metabolism in cerebral mouse models of multiple sclerosis. [Neurosci Lett. 606: 204-8.](#)
10. Baumann, B. *et al.* (2017) Conditional Müller Cell Ablation Leads to Retinal Iron Accumulation. [Invest Ophthalmol Vis Sci. 58 \(10\): 4223-34.](#)

Storage

Store at +4°C for one month or at -20°C for longer.

This product should be stored undiluted.

This product should be stored undiluted. 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	18 months from date of despatch.
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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
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Regulatory	For research purposes only
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Related Products

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:FITC \(MCA1212F\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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'M340944:190109'

Printed on 11 Oct 2019

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