

## Datasheet: MCA1033PE

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

## Product Details

**RRID** AB\_321760

**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 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 R. Phycoerythrin (RPE) - lyophilized

**Reconstitution** Reconstitute with 1 ml distilled water

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578

**Preparation** Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

**Buffer Solution** Phosphate buffered saline

**Preservative** 0.09% Sodium Azide

**Stabilisers** 1% Bovine Serum Albumin  
5% Sucrose

**Immunogen** Concanavilin A activated mouse spleen cells.

**External Database** **UniProt:**

**Links**

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

**Entrez Gene:**

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

**Synonyms**

Tfrc

**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 10<sup>6</sup> 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**

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

**Guarantee**

12 months from date of reconstitution.

**Health And Safety Information** Material Safety Datasheet documentation #10075 available at:  
10075: <https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:RPE \(MCA1212PE\)](#)

### Recommended Useful Reagents

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

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

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