

## Datasheet: MCA1033A647

<b>Description:</b>	RAT ANTI MOUSE CD71:Alexa Fluor® 647
<b>Specificity:</b>	CD71
<b>Other names:</b>	TRANSFERRIN RECEPTOR
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	YTA74.4
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	100 TESTS/1ml

## 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 - 1/5

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.

<b>Target Species</b>	Mouse						
<b>Product Form</b>	Purified IgG conjugated to Alexa Fluor® 647 - liquid						
<b>Max Ex/Em</b>	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>Alexa Fluor®647</td> <td>650</td> <td>665</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Alexa Fluor®647	650	665
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
Alexa Fluor®647	650	665					
<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</b>	0.09% Sodium Azide						
<b>Stabilisers</b>	1% Bovine Serum Albumin						
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05 mg/ml						
<b>Immunogen</b>	Concanavilin A activated mouse spleen cells.						
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">Q62351</a> <a href="#">Related reagents</a>						

**Entrez Gene:**

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

**Synonyms**

Tfr

**RRID**

AB\_324926

**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. 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.* (2014) Reduced Levels of Hspa9 Attenuates Stat5 Activation in Mouse B-cells. [Exp Hematol. pii: S0301-472X\(14\)00817-0.](#)
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  $\alpha 4$  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.](#)

**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 or at -20°C if preferred.

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.

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**Guarantee** 12 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:Alexa Fluor® 647 \(MCA1212A647\)](#)

### Recommended Useful Reagents

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

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

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