

Datasheet: MCA1031A647

**BATCH NUMBER 156407**

<b>Description:</b>	RAT ANTI MOUSE CD45:Alexa Fluor® 647
<b>Specificity:</b>	CD45
<b>Other names:</b>	LCA
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	YW62.3
<b>Isotype:</b>	IgG2b
<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

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>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	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 Stabilisers</b>	0.09% Sodium Azide		
	1% Bovine Serum Albumin		
<b>Approx. Protein</b>	IgG concentration 0.05 mg/ml		

## Concentrations

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Immunogen	Mouse spleen cells.
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## External Database Links

### UniProt:

[P06800](#)

[Related reagents](#)

### Entrez Gene:

[19264](#)

Ptprc

[Related reagents](#)

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Synonyms	Ly-5
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RRID	AB_321156
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Fusion Partners	Spleen cells from immunised DA rats were fused with cells of the rat Y3/Ag1.2.3 myeloma cell line.
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## Specificity

**Rat anti Mouse CD45 antibody, clone YW62.3** recognizes the murine CD45 cell surface antigen, a single pass type1 transmembrane glycoprotein also known as protein tyrosine phosphatase receptor type C (PTPRC) and originally termed Leucocyte Common Antigen (LCA). CD45 is a 180-220kDa glycoprotein expressed by all leucocytes.

CD45 is encoded by 3 alleles in mice, differentially expressed by various inbred strains. The Ly5 gene was originally described with the gene product LY5.1 expressed in C57bl/6 and Ly5.2 expressed in SJL strains ([Komura et al. 1975](#)), this was subsequently expanded to include a third allele encoding Ly5.3 ([Shen et al. 1986](#)). Further, in 1987 a reversal of nomenclature was instigated resulting in the allele in C57bl/6 becoming Ly5<sup>b</sup> encoding Ly5.2 and the allele in SJL mice becoming Ly5<sup>a</sup> encoding Ly5.1 ([Morse et al. 1987](#)). Further changes were made in 1992 with Ly5.1 becoming CD45.1 (SJL) and Ly5.2 becoming CD45.2 (C57bl/6). Finally, following work demonstrating homology between the CD45 antigen and a receptor linked protein tyrosine phosphatase the CD45<sup>a</sup> gene was renamed Ptprc<sup>a</sup> and CD45<sup>b</sup> renamed Ptprc<sup>b</sup> ([Charbonneau et al. 1988](#); [Zebedee et al. 1991](#)).

A number of different isoforms of CD45 are expressed on murine leucocytes depending on the pattern of alternative splicing of 3 exons termed A, B and C encoding regions of ~ 50 amino acids located at the N terminal region of the extracellular portion of CD45. The restricted proteins are termed CD45R with a designation depending on the expressed codon product. ([Birkeland et al. 1989](#)).

Rat anti mouse CD45 antibody, clone YW62.3 is reactive with all isoforms of murine CD45.

N.B. Some reactivity with human tissue has been observed.

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## 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

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#### Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. 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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**Regulatory** For research purposes only

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