Datasheet: MCA1031SBY575

Description:	RAT ANTI MOUSE CD45:StarBright Yellow 575
Specificity:	CD45
Other names:	LCA
Format:	StarBright Yellow 575
Product Type:	Monoclonal Antibody
Clone:	YW62.3
Isotype:	IgG2b
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 (1)	▪			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.

(1)**Staining at lower temperatures generally requires longer incubation to reach antibody binding equilibrium, and this effect is more pronounced for StarBright Dyes due to their larger size. For optimum staining, Bio-Rad recommends incubating samples either overnight at 4°C or 1 hour at room temperature.**

Target Species

Mouse

Product Form

Purified IgG conjugated to StarBright Yellow 575 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright Yellow 575	548	579

Preparation

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

Buffer Solution

Phosphate buffered saline

Preservative

0.09% sodium azide (NaN_3)

Stabilisers	1% bovine serum albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
Approx. Protein Concentrations	For information on the concentration of our StarBright Dye conjugated reagents please visit our FAQ page.
Immunogen	Mouse spleen cells.
External Database Links	**UniProt:** P06800 Related reagents **Entrez Gene:** 19264 Ptprc Related reagents
Synonyms	Ly-5
Fusion Partners	Spleen cells from immunised DA rats were fused with cells of the rat Y3/Ag1.2.3 myeloma cell line.

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 $Ly5^b$ encoding Ly5.2 and the allele in SJL mice becoming $Ly5^a$ 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 $CD45^a$ gene was renamed $Ptprc^a$ and $CD45^b$ renamed $Ptprc^b$ (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.

Flow Cytometry

Use 5µl of the suggested working dilution to label 0.5×10^6 cells in 100µl. Best practices suggest a 5 min centrifugation at 6,000g prior to sample application.

References

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Storage	This product is shipped at ambient temperature. 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/MCA1031SBY575
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

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MOUSE SEROBLOCK FcR (BUF041B)

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