**Datasheet: MCA1031A488**

<table>
<thead>
<tr>
<th>Description</th>
<th>RAT ANTI MOUSE CD45:Alexa Fluor® 488</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>CD45</td>
</tr>
<tr>
<td>Other names</td>
<td>LCA</td>
</tr>
<tr>
<td>Format</td>
<td>ALEXA FLUOR® 488</td>
</tr>
<tr>
<td>Product Type</td>
<td>Monoclonal Antibody</td>
</tr>
<tr>
<td>Clone</td>
<td>YW62.3</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG2b</td>
</tr>
<tr>
<td>Quantity</td>
<td>100 TESTS/1ml</td>
</tr>
</tbody>
</table>

**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).

<table>
<thead>
<tr>
<th>Applications</th>
<th>Yes</th>
<th>No</th>
<th>Not Determined</th>
<th>Suggested Dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Cytometry</td>
<td>Neat</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

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 Alexa Fluor® 488 - liquid

**Max Ex/Em**

<table>
<thead>
<tr>
<th>Fluorophore</th>
<th>Excitation Max (nm)</th>
<th>Emission Max (nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexa Fluor®488</td>
<td>495</td>
<td>519</td>
</tr>
</tbody>
</table>

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

**Buffer Solution**
Phosphate buffered saline

**Preservative Stabilisers**
- 0.09% Sodium Azide
- 1% Bovine Serum Albumin

**Approx. Protein Concentrations**
IgG concentration 0.05 mg/ml

**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\(^a\) encoding Ly5.2 and the allele in SJL mice becoming Ly5\(^b\) 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 10ul of the suggested working dilution to label 10\(^6\) 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

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.

Shelf Life
18 months from date of despatch.

Acknowledgements
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Material Safety Datasheet documentation #10041 available at:

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