# Datasheet: MCA43FA

## BATCH NUMBER 1606

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| **Description:** | MOUSE ANTI RAT CD45:FITC |
| **Specificity:** | CD45 |
| **Other names:** | LCA |
| **Format:** | FITC |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | OX-1 |
| **Isotype:** | IgG1 |
| **Quantity:** | 50 µg |

## 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 | ▪ | | | Neat - 1/10 |

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**

Rat

**Product Form**

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

**Max Ex/Em**

| Fluorophore | Excitation Max (nm) | Emission Max (nm) |
|---|---|---|
| FITC | 490 | 525 |

**Buffer Solution**

Phosphate buffered saline

**Preservative Stabilisers**

0.09% Sodium Azide
1% Bovine Serum Albumin

**Approx. Protein Concentrations**

IgG concentration 0.1 mg/ml

**Immunogen**

Rat thymocyte membrane glycoproteins.

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| **External Database Links** | **UniProt:**<br>P04157 Related reagents<br><br>**Entrez Gene:**<br>24699 Ptprc Related reagents |
| **RRID** | AB_566765 |
| **Fusion Partners** | Spleen cells from immunised BALB/c mice were fused with cells of the NS1 mouse myeloma cell line. |
| **Specificity** | **Mouse anti Rat CD45 antibody, clone OX-1** recognizes CD45, also known as the leucocyte common antigen (LCA). The leucocyte common antigen consists of a family of heavily glycosylated membrane glycoproteins of molecular weight 180 – 240kDa.<br><br>Antibodies recognising a common epitope on all of these isoforms are termed CD45, whilst those recognising only individual isoforms are termed CD45RA, CD45RO etc. OX-1 reacts with all forms of CD45 expressed by all haematopoietic cells, except erythrocytes.<br><br>CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction.<br><br>This product is routinely tested in flow cytometry on rat splenocytes |
| **Flow Cytometry** | Use 10ul of the suggested working dilution to label $10^6$ cells in 100ul. |
| **References** | 1. Sunderland, C.A. *et al.* (1979) Purification with monoclonal antibody of a predominant leukocyte-common antigen and glycoprotein from rat thymocytes. Eur J Immunol. 9 (2): 155-9.<br>2. Woollett, G.R. *et al.* (1985) Molecular and antigenic heterogeneity of the rat leukocyte-common antigen from thymocytes and T and B lymphocytes. Eur J Immunol. 15 (2): 168-73.<br>3. Martín, A. *et al.* (1995) Passive dual immunization against tumour necrosis factor-alpha (TNF-alpha) and IL-1 beta maximally ameliorates acute aminonucleoside nephrosis. Clin Exp Immunol. 99 (2): 283-8.<br>4. Sato, K. *et al.* (2001) Carbon monoxide generated by heme oxygenase-1 suppresses the rejection of mouse-to-rat cardiac transplants. J Immunol. 166 (6): 4185-94.<br>5. Murakami, K. *et al.* (2000) Regulation of mast cell signaling through high-affinity IgE receptor by CD45 protein tyrosine phosphatase. Int Immunol. 12 (2): 169-76.<br>6. Standring, R. *et al.* (1978) The predominant heavily glycosylated glycoproteins at the surface of rat lymphoid cells are differentiation antigens. Eur J Immunol. 8 (12): 832-9.<br>7. Giezeman-Smits, K.M. *et al.* (1999) The regulatory role of CD45 on rat NK cells in target cell lysis. J Immunol. 163 (1): 71-6.<br>8. Zilka, N. *et al.* (2009) Human misfolded truncated tau protein promotes activation of microglia and leukocyte infiltration in the transgenic rat model of tauopathy. J Neuroimmunol. 209 (1-2): 16-25.<br>9. Schupp, N. *et al.* (2011) Mineralocorticoid receptor-mediated DNA damage in kidneys of |

DOCA-salt hypertensive rats. FASEB J. 25 (3): 968-78.
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15. Ladhoff, J. *et al.* (2010) Immune privilege of endothelial cells differentiated from endothelial progenitor cells. Cardiovasc Res. 88: 121-9.
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17. Wang, C. *et al.* (2015) Small activating RNA induces myogenic differentiation of rat adipose-derived stem cells by upregulating MyoD. Int Braz J Urol. 41 (4): 764-72.
18. Tanner, D.C. *et al.* (2015) cFLIP is critical for oligodendrocyte protection from inflammation. Cell Death Differ. 22 (9): 1489-501.
19. Runesson, E. *et al.* (2015) Nucleostemin- and Oct 3/4-positive stem/progenitor cells exhibit disparate anatomical and temporal expression during rat Achilles tendon healing. BMC Musculoskelet Disord. 16: 212.
20. Hellenbrand, D.J. *et al.* (2019) Sustained interleukin-10 delivery reduces inflammation and improves motor function after spinal cord injury. J Neuroinflammation. 16 (1): 93.
21. Pilipović, I. *et al.* (2019) Propranolol diminished severity of rat EAE by enhancing immunoregulatory/protective properties of spinal cord microglia. Neurobiol Dis. Nov 2 [Epub ahead of print].

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| **Storage** | Store at +4°C or at -20°C if preferred.<br><br>This product should be stored undiluted.<br><br>Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.<br><br>Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use. |
| **Guarantee** | 12 months from date of despatch |
| **Health And Safety Information** | Material Safety Datasheet documentation #10041 available at:<br>https://www.bio-rad-antibodies.com/SDS/MCA43FA<br>10041 |
| **Regulatory** | For research purposes only |

# Related Products

## Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA1209F)


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|---|---|---|---|---|---|
| **North & South America** | Tel: +1 800 265 7376<br>Fax: +1 919 878 3751<br>Email: antibody_sales_us@bio-rad.com | **Worldwide** | Tel: +44 (0)1865 852 700<br>Fax: +44 (0)1865 852 739<br>Email: antibody_sales_uk@bio-rad.com | **Europe** | Tel: +49 (0) 89 8090 95 21<br>Fax: +49 (0) 89 8090 95 50<br>Email: antibody_sales_de@bio-rad.com |


To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M367692:200529'

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