

Datasheet: MCA1388

**BATCH NUMBER 180424**

<b>Description:</b>	RAT ANTI MOUSE CD45
<b>Specificity:</b>	CD45
<b>Other names:</b>	LCA
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	IBL-3/16
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.25 mg

## 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	▪			1/50 - 1/100
Immunohistology - Frozen (1)	▪			1/50 - 1/100
Immunohistology - Paraffin		▪		
Immunohistology - Resin		▪		
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting		▪		
Immunofluorescence	▪			

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.

**(1)The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.**

<b>Target Species</b>	Mouse
<b>Species Cross Reactivity</b>	Does not react with:Rat, Human, Chicken

<b>Product Form</b>	Purified IgG - liquid
<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 (NaN <sub>3</sub> ) 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.5 mg/ml
<b>Immunogen</b>	Purified B cells from mouse lymph nodes.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P06800</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">19264</a> Ptprc    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Ly-5
<b>RRID</b>	AB_321729
<b>Fusion Partners</b>	Spleen cells from an immunized Wistar rat were fused with cells of the SP2/0-Ag14 mouse myeloma cell line
<b>Specificity</b>	<p><b>Rat anti Mouse CD45 antibody, clone IBL-3/16</b> recognizes murine Receptor-type tyrosine-protein phosphatase C, also known as CD45, Leukocyte common antigen, T200 or Lymphocyte antigen 5 (Ly5). CD45 is a 1291 amino acid ~175kDa single pass type I transmembrane glycoprotein belonging to the protein -tyrosing phosphatase family. CD45 has two <a href="#">fibronectin type-III</a> domains and two <a href="#">tyrosine protein phosphatase</a> domains (<a href="#">UniProt:: P06800</a>).</p> <p>Multiple isoforms are generated by alternative splicing with isoforms having differing deletions in the N-terminal region (<a href="#">Saga et al. 1987</a>). Rat anti Mouse CD45 antibody, clone IBL-3/16 is expected to recognize all isoforms of murine CD45.</p> <p>Rat anti Mouse CD45 antibody, clone IBL-3/16 has been used successfully for the identification of CD45 in murine samples using Immunohistochemical (both cryo and FFPE), immunofluorescence and western blotting techniques (<a href="#">Kondo et al. 2011</a>, <a href="#">Cuadros et al. 2006</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	1. Clausen, B.H. <i>et al.</i> (2008) Interleukin-1beta and tumor necrosis factor-alpha are expressed by different subsets of microglia and macrophages after ischemic stroke in

- mice. [J Neuroinflammation. 5: 46.](#)
2. Laporte, V. *et al.* (2006) CD40 deficiency mitigates Alzheimer's disease pathology in transgenic mouse models. [J Neuroinflammation. 3: 3.](#)
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  5. Boger, H.A. *et al.* (2007) Long-term consequences of methamphetamine exposure in young adults are exacerbated in glial cell line-derived neurotrophic factor heterozygous mice. [J Neurosci. 27: 8816-25.](#)
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  7. Cuadros, M.A. *et al.* (2006) Specific immunolabeling of brain macrophages and microglial cells in the developing and mature chick central nervous system. [J Histochem Cytochem. 54: 727-38.](#)
  8. Jiang, H.R. *et al.* (2001) Total dose and frequency of administration critically affect success of nasal mucosal tolerance induction. [Br J Ophthalmol. 85: 739-44.](#)
  9. Peng, Y. *et al.* (2010) L-3-n-butylphthalide improves cognitive impairment and reduces amyloid-beta in a transgenic model of Alzheimer's disease. [J Neurosci. 30: 8180-9.](#)
  10. Richards, J.G. *et al.* (2003) PS2APP transgenic mice, coexpressing hPS2mut and hAPP<sup>swe</sup>, show age-related cognitive deficits associated with discrete brain amyloid deposition and inflammation. [J Neurosci. 23: 8989-9003.](#)
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  12. Rahman, A. *et al.* (2011) Chronic colitis induces expression of  $\beta$ -defensins in murine intestinal epithelial cells. [Clin Exp Immunol. 163: 123-30.](#)
  13. Klose, A. *et al.* (2013) Monocyte/macrophage MMP-14 modulates cell infiltration and T-cell attraction in contact dermatitis but not in murine wound healing. [Am J Pathol. 182: 755-64.](#)
  14. Ricciardelli, C. *et al.* (2011) The ADAMTS1 protease gene is required for mammary tumor growth and metastasis. [Am J Pathol. 179: 3075-85.](#)
  15. Wang, P. *et al.* (2012) IL-22 signaling contributes to West Nile encephalitis pathogenesis. [PLoS One. 7: e44153.](#)
  16. Passos, G.F. *et al.* (2013) The bradykinin B1 receptor regulates A $\beta$  deposition and neuroinflammation in Tg-SwDI mice. [Am J Pathol. 182: 1740-9.](#)
  17. Medeiros, R. *et al.* (2011) Loss of muscarinic M1 receptor exacerbates Alzheimer's disease-like pathology and cognitive decline. [Am J Pathol. 179: 980-91.](#)
  18. Ferrer-Martín, R.M. *et al.* (2015) Microglial Activation Promotes Cell Survival in Organotypic Cultures of Postnatal Mouse Retinal Explants. [PLoS One. 10 \(8\): e0135238.](#)
  19. Tzekov, R. *et al.* (2016) Sub-Chronic Neuropathological and Biochemical Changes in Mouse Visual System after Repetitive Mild Traumatic Brain Injury. [PLoS One. 11 \(4\): e0153608.](#)
  20. Witcher, K.G. *et al.* (2018) Traumatic brain injury-induced neuronal damage in the somatosensory cortex causes formation of rod-shaped microglia that promote astrogliosis and persistent neuroinflammation. [Glia. 66 \(12\): 2719-36.](#)

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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. 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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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10338 available at: 10338: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10338.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10338.pdf</a>
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>
Rabbit Anti Rat IgG (STAR16...)	<a href="#">DyLight®800</a>
Goat Anti Rat IgG (STAR131...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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