

Datasheet: MCA1388

BATCH NUMBER 163247

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

	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.

Target Species	Mouse
Species Cross Reactivity	Does not react with:Rat, Human, Chicken

Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline.
Preservative Stabilisers	<0.1% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.5 mg/ml
Immunogen	Purified B cells from mouse lymph nodes.
External Database Links	<p>UniProt: P06800 Related reagents</p> <p>Entrez Gene: 19264 Ptprc Related reagents</p>
Synonyms	Ly-5
RRID	AB_321729
Fusion Partners	Spleen cells from an immunized Wistar rat were fused with cells of the SP2/0-Ag14 mouse myeloma cell line
Specificity	<p>Rat anti Mouse CD45 antibody, clone IBL-3/16 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 fibronectin type-III domains and two tyrosine protein phosphatase domains (UniProt:: P06800).</p> <p>Multiple isoforms are generated by alternative splicing with isoforms having differing deletions in the N-terminal region (Saga et al. 1987). 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 (Kondo et al. 2011, Cuadros et al. 2006).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	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.](#)
 3. Paris, D. *et al.* (2010) Reduction of beta-amyloid pathology by celastrol in a transgenic mouse model of Alzheimer's disease. [J Neuroinflammation. 7: 17.](#)
 4. Kondo, Y. *et al.* (2011) Macrophages counteract demyelination in a mouse model of globoid cell leukodystrophy. [J Neurosci. 31: 3610-24.](#)
 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.](#)
 6. Boger, H.A. *et al.* (2009) Minocycline restores striatal tyrosine hydroxylase in GDNF heterozygous mice but not in methamphetamine-treated mice. [Neurobiol Dis. 33: 459-66.](#)
 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 hAPPswe, show age-related cognitive deficits associated with discrete brain amyloid deposition and inflammation. [J Neurosci. 23: 8989-9003.](#)
 11. Li, L. *et al.* (2008) GRK5 deficiency exaggerates inflammatory changes in TgAPPsw mice. [J Neuroinflammation. 5: 24.](#)
 12. Rahman, A. *et al.* (2011) Chronic colitis induces expression of β -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 β 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.](#)
 21. Boza-Serrano, A. *et al.* (2019) Galectin-3, a novel endogenous TREM2 ligand, detrimentally regulates inflammatory response in Alzheimer's disease. [Acta Neuropathol.](#)

[138 \(2\): 251-73.](#)

22. Da Ros, F. *et al.* (2017) Targeting Interleukin-1 β Protects from Aortic Aneurysms Induced by Disrupted Transforming Growth Factor β Signaling. [Immunity. 47 \(5\): 959-973.e9.](#)

23. Singh, T. *et al.* (2019) Loss of MafA and MafB expression promotes islet inflammation. [Sci Rep. 9 \(1\): 9074.](#)

24. Tóth, K. *et al.* (2022) The NKCC1 ion transporter modulates microglial phenotype and inflammatory response to brain injury in a cell-autonomous manner. [PLoS Biol. 20 \(1\): e3001526.](#)

Storage This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10338 available at: 10338: <https://www.bio-rad-antibodies.com/uploads/MSDS/10338.pdf>

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®550 , DyLight®650 , DyLight®800
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin

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