

Datasheet: MCA2478

**BATCH NUMBER 180319**

<b>Description:</b>	MOUSE ANTI DUCK CD4
<b>Specificity:</b>	CD4
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	Du CD4-2
<b>Isotype:</b>	IgG2a
<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 - 10 ug/ml
Immunohistology - Frozen			▪	
Immunohistology - Paraffin	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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.

<b>Target Species</b>	Duck
<b>Species Cross Reactivity</b>	<p>Reacts with: Goose</p> <p>Does not react with: Chicken</p> <p><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>
<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>	0.05% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	293T cells expressing Pekin duck CD4.
<b>RRID</b>	AB_609597
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the SP2/0 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Duck CD4 antibody, clone Du CD4-2</b> recognizes Pekin duck CD4, shown to be expressed by thymocytes, splenocytes and peripheral lymphoid cells.</p> <p>Since the majority of avian immune studies have been carried out on chickens, relatively little is known about the immune system of ducks, though there is a resemblance between the main lymphoid organs, the spleen, thymus and bursa of Fabricius. At the cellular level, studies have shown that like mammalian T cells, duck lymphocytes are responsive to phytohaemagglutinin (PHA), and all cells reacting with clone Du CD4-2 have been identified as CD3<sup>+</sup> T cells (<a href="#">Kothlow et al. 2005</a>).</p> <p>Clone Du CD4-2 can be used to identify duck T helper cells. Mouse anti Duck CD4 antibody, clone Du CD4-2 does not appear to react with Mallard.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"><li>1. Kothlow, S. <i>et al.</i> (2005) Characterization of duck leucocytes by monoclonal antibodies. <a href="#">Dev Comp Immunol. 29 (8): 733-48.</a></li><li>2. Yu, X. <i>et al.</i> (2012) Attenuated Salmonella typhimurium delivering DNA vaccine encoding duck enteritis virus UL24 induced systemic and mucosal immune responses and conferred good protection against challenge. <a href="#">Vet Res. 43: 56.</a></li><li>3. Shanmugasundaram, R. and Selvaraj, R.K. (2012) Regulatory T cell properties of thymic CD4(+)CD25(+) cells in ducks. <a href="#">Vet Immunol Immunopathol. 149: 20-7.</a></li><li>4. Lian, B. <i>et al.</i> (2011) Induction of immune responses in ducks with a DNA vaccine encoding duck plague virus glycoprotein C. <a href="#">Virol J. 8: 214.</a></li><li>5. Huang, J. <i>et al.</i> (2014) An attenuated duck plague virus (DPV) vaccine induces both systemic and mucosal immune responses to protect ducks against virulent DPV infection. <a href="#">Clin Vaccine Immunol. 21: 457-62.</a></li><li>6. Chen, S. <i>et al.</i> (2015) Age-related development and tissue distribution of T cell markers (CD4 and CD8a) in Chinese goose. <a href="#">Immunobiology. pii: S0171-2985(14)00289-7.</a></li><li>7. Zhou, H. <i>et al.</i> (2016) LPAIV H9N2 Drives the Differential Expression of Goose Interferons and Proinflammatory Cytokines in Both <i>In Vitro</i> and <i>In Vivo</i> Studies. <a href="#">Front</a></li></ol>

[Microbiol. 7: 166.](#)

8. Chen, S. *et al.* (2016) Immune-Related Gene Expression Patterns in GPV- or H9N2-Infected Goose Spleens. [Int J Mol Sci. 17 \(12\): pii: E1990.](#)

9. Zhou H *et al.* (2016) Antigen distribution of TMUV and GPV are coincident with the expression profiles of CD8 $\alpha$ -positive cells and goose IFN $\gamma$ . [Sci Rep. 6: 25545.](#)

10. Cornelissen, J.B. *et al.* (2013) Differences in highly pathogenic avian influenza viral pathogenesis and associated early inflammatory response in chickens and ducks. [Avian Pathol. 42 \(4\): 347-64.](#)

11. Wu, Y. *et al.* (2019) Changes in the small intestine mucosal immune barrier in Muscovy ducklings infected with Muscovy duck reovirus [Veterinary Microbiology. \[Epub ahead of print\].](#)

<b>Further Reading</b>	1. Higgins, D.A. & Teoh, C.S. (1988) Duck lymphocytes. II. Culture conditions for optimum transformation response to phytohaemagglutinin. <a href="#">J Immunol Methods. 106 (1): 135-45.</a>
<b>Storage</b>	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2478">https://www.bio-rad-antibodies.com/SDS/MCA2478</a> 10040
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (H/L) (STAR117...) [FITC](#)

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'M367018:200529'

Printed on 13 May 2024