

Datasheet: MCA2413GA

Description:	MOUSE ANTI CHICKEN CD45
Specificity:	CD45
Other names:	LEUCOCYTE COMMON ANTIGEN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	UM16-6
Isotype:	IgG2a
Quantity:	0.1 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	▪			1/100 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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	Chicken
Species Cross Reactivity	Does not react with: Turkey
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	0.09% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	COS cells transfected with CD45 gene.
Specificity	<p>Mouse anti Chicken CD45 antibody, clone UM16-6 recognizes chicken CD45, also known as leucocyte common antigen. CD45 is a heavily-glycosylated transmembrane protein tyrosine phosphatase (PTPase) expressed by all nucleated cells of haematopoietic origin. Variation in the expression of a particular CD45 isoform, is regulated during the haematopoietic development of the different cell lineages.</p> <p>CD45 is essential for antigen-induced signal transduction through the antigen receptor and as with other PTPase family members, acts in balance with protein tyrosine kinases, causing the dephosphorylation of negative regulatory tyrosine sites. De-phosphorylation by CD45, is required for the activation of the src-family kinases p56^{lck} and p59^{fyn}.</p> <p>Chicken CD45 has an additional cysteine residue near the transmembrane region compared to human and shark CD45 (Okumura et al. 1996). The overall domain structure between mammalian and chicken CD45 appears to be conserved, but the sequence homology between the extracellular regions is very low.</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
Histology Positive Control Tissue	Chicken lung
References	<ol style="list-style-type: none"> Reddy SK <i>et al.</i> (2008) The BAFF-Interacting receptors of chickens. Dev Comp Immunol. 32 (9): 1076-87. Pavlova, S. <i>et al.</i> (2010) <i>In vitro</i> and <i>in vivo</i> characterization of glycoprotein C-deleted infectious laryngotracheitis virus. J Gen Virol. 91:847-57. Harvanová, D. <i>et al.</i> (2014) Isolation, cultivation and characterisation of pigeon osteoblasts seeded on xenogeneic demineralised cancellous bone scaffold for bone grafting. Vet Res Commun. 38 (3): 221-8. Ulrich-Lynge SL <i>et al.</i> (2015) The consequence of low mannose-binding lectin plasma concentration in relation to susceptibility to <i>Salmonella infantis</i> in chickens. Vet Immunol Immunopathol. 163 (1-2): 23-32. Wattrang, E. <i>et al.</i> (2015) CD107a as a marker of activation in chicken cytotoxic T cells. J Immunol Methods. 419: 35-47. Czerwiński, J. <i>et al.</i> (2015) The use of genetically modified Roundup Ready soyabean meal and genetically modified MON 810 maize in broiler chicken diets. Part 1. Effects on performance and blood lymphocyte subpopulations J Anim Feed Sci 24: 134-43. Eren, U. <i>et al.</i> (2016) The several elements of intestinal innate immune system at the beginning of the life of broiler chicks. Microsc Res Tech. 79 (7): 604-14. Röhe, I. <i>et al.</i> (2017) Effect of feeding soybean meal and differently processed peas on the gut mucosal immune system of broilers Poultry Science. Feb 23 [Epub ahead of print]

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10. Fenzl, L. *et al.* (2017) $\gamma\delta$ T cells represent a major spontaneously cytotoxic cell population in the chicken. [Dev Comp Immunol. 73: 175-83.](#)
11. Larsen, F.T. *et al.* (2019) Immunoprofiling of peripheral blood from infectious bronchitis virus vaccinated MHC-B chicken lines - Monocyte MHC-II expression as a potential correlate of protection. [Dev Comp Immunol. 96: 93-102.](#)
12. Naghizadeh, M. *et al.* (2019) Rapid whole blood assay using flow cytometry for measuring phagocytic activity of chicken leukocytes. [Vet Immunol Immunopathol. 207: 53-61.](#)
13. Watrang, E. *et al.* (2020) Immune responses upon experimental *Erysipelothrix rhusiopathiae* infection of naïve and vaccinated chickens. [Vet Res. 51 \(1\): 114.](#)
14. Alber, A. *et al.* (2019) Avian Pathogenic Escherichia coli (APEC) Strain-Dependent Immunomodulation of Respiratory Granulocytes and Mononuclear Phagocytes in CSF1R-Reporter Transgenic Chickens. [Front Immunol. 10: 3055.](#)

Further Reading

1. Okumura, M. *et al.* (1996) Comparison of CD45 extracellular domain sequences from divergent vertebrate species suggests the conservation of three fibronectin type III domains. [J Immunol. 157 \(4\): 1569-75.](#)
2. Jung, E.J. *et al.* (1997) Phosphorylation of chicken protein tyrosine phosphatase 1 by casein kinase II *in vitro*. [Experimental and Molecular Medicine 29\(4\): 229-33.](#)
3. Symons, A. *et al.* (1999) Domain organization of the extracellular region of CD45. [Protein Eng. 12 \(10\): 885-92.](#)

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 #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2413GA>
10040

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

- | | |
|---|---------------------|
| Rabbit Anti Mouse IgG (STAR12...) | RPE |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | HRP |
| Goat Anti Mouse IgG (STAR76...) | RPE |
| Rabbit Anti Mouse IgG (STAR13...) | HRP |

Goat Anti Mouse IgG (STAR70...) [FITC](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),
[FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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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
'M383824:210513'

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