

Datasheet: MCA2413PE

Description:	MOUSE ANTI CHICKEN CD45:RPE
Specificity:	CD45
Other names:	LEUCOCYTE COMMON ANTIGEN
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	UM16-6
Isotype:	IgG2a
Quantity:	100 TESTS

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 - 1/5

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 conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1.0 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
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 1% Bovine Serum Albumin
Immunogen	COS cells transfected with CD45 gene.
RRID	AB_808433
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^{lyn}.</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.
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. Watrang, 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] Kjærup, R.B. <i>et al.</i> (2017) Comparison of growth performance and immune parameters of three commercial chicken lines used in organic production. Vet Immunol Immunopathol. 187: 69-79.

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. Wattrang, 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

Prior to reconstitution store at +4°C.
 After reconstitution store at +4°C.
 DO NOT FREEZE. This product is photosensitive and should be protected from light.
 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 #20487 available at:
<https://www.bio-rad-antibodies.com/SDS/MCA2413PE>
 20487

Regulatory

For research purposes only

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