Datasheet: MCA1655GA

BATCH NUMBER 165739

Description:	MOUSE ANTI BOVINE WC1
Specificity:	WC1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CC101
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	▪			
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
Functional Assays			▪	

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.

Target Species

Bovine

Species Cross Reactivity

Reacts with: Pig, Sheep

N.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.

Product Form

Purified IgG - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture

	supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN_3)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Con A stimulated bovine lymphocytes
External Database Links	**UniProt:** P30205 Related reagents **Entrez Gene:** 338056 CD163L1 Related reagents
Specificity	**Mouse anti Bovine WC1 antibody, clone CC101**, recognizes a subset of $WC1^+$ T-cells expressing the WC1.1 isoform (MacHugh *et al.* 1993). The bovine WC1 cell surface antigen is expressed by a population of gamma/delta T-cells that lack CD2, CD4 and CD8, but express CD3. WC1 expression appears to be heterogeneous and antibodies to this cluster show differing reaction patterns (Crocker *et al.* 1993). Mouse anti bovine WC1, clone CC101, immunoprecipitates a 215 kDa molecule from bovine cells and also recognizes the swine homolog of WC1, which is a 180 kDa molecule. In pigs, the 180 kDa molecule is expressed by a gamma/delta TCR positive T-cell population that also lack CD2, CD4 and CD8 (Carr *et al.* 1994).
Flow Cytometry	Use10µl of the suggested working dilution to label 10^6 cells in 100µl
References	1. Howard, C.J. & Naessens, J. (1993) Summary of workshop findings for cattle. Vet Immunol Immunopathol. 39: 25-48. 2. MacHugh, N. *et al*. (1993) Clustering of monoclonal antibodies recognizing different members of the WC1 gene family. Vet Immunol Immunopathol. 39: 155-60. 3. Crocker, G. *et al*. (1993) Analysis of the gamma/delta T cell restricted antigen WC1. Vet Immunol Immunopathol. 39: 137-44. 4. Lund, B. *et al*. (1993) Expression of T19 (WC1) molecules by ovine lymphocytes. Vet Immunol Immunopathol. 39: 145-53. 5. Schröder, A.C. & Hamann, J. (2005) The influence of technical factors on differential cell count in milk. J Dairy Res. 72: 153-8. 6. Patarroyo, J.H. *et al.* (2009) Immune response of bovines stimulated by synthetic vaccine SBm7462 against *Rhipicephalus (Boophilus) microplus*. Vet Parasitol. 166: 333-9. 7. Al-Mohammed Salem Kazem, T. *et al.* (2012) The Cellular Populations of Normal

Camel (Camelus dromedaries) Milk Open Journal of Veterinary Medicine. 02 (04): 262-5.
8. Sedlak, C. *et al.* (2014) IL-12 and IL-18 induce interferon-γ production and *de novo* CD2 expression in porcine γδ T cells. Dev Comp Immunol. 47: 115-22.
9. Liu, X. *et al.* (2014) Crusted scabies is associated with increased IL-17 secretion by skin T cells. Parasite Immunol. 36: 594-604.
10. Al-Ashqar, R.A. *et al.* (2015) The CD markers of camel (*Camelus dromedarius.*) milk cells during mastitis: the LPAM-1 expression is an indication of possible mucosal nature of the cellular trafficking. Res Vet Sci. 99: 77-81.
11. Heiser, A. *et al.* (2015) Grazing dairy cows had decreased interferon-γ, tumor necrosis factor, and interleukin-17, and increased expression of interleukin-10 during the first week after calving. J Dairy Sci. 98: 937-46.
12. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. Sci Rep. 7 (1): 3441.
13. Hussen, J. *et al.* (2018) Expression Patterns of Cell Adhesion Molecules on CD4+ T Cells and WC1+ T Cells in the Peripheral Blood of Dromedary Camels. Pakistan Veterinary Journal. 38 (03): 231-236.
14. Kato-Mori, Y. *et al.* (2021) Characterization of a variant CD4 molecule in Japanese Black cattle. Vet Immunol Immunopathol. 232: 110167.
15. Blanco, F.C. *et al.* (2021) Identifying Bacterial and Host Factors Involved in the Interaction of *Mycobacterium bovis* with the Bovine Innate Immune Cells. Front Immunol. 12: 674643.

Further Reading

1. Wijngaard, P. *et al.* (1992) Molecular characterization of the WC1 antigen expressed specifically on bovine CD4-CD8- gamma delta T lymphocytes. J Immunol. 149: 3273-7.
2. Takamatsu, H.H. *et al.* (2006) Porcine gammadelta T cells: possible roles on the innate and adaptive immune responses following virus infection. Vet Immunol Immunopathol. 112: 49-61.
3. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.

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/MCA1655GA
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

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL (MCA929)

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

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M419038:230511'

Printed on 24 Jan 2024