Datasheet: MCA1655F

Description:	MOUSE ANTI BOVINE WC1:FITC
Specificity:	WC1
Format:	FITC
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	▪			Neat - 1/10

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

Bovine

Species Cross Reactivity

Reacts with: Pig, Sheep
N.B. Antibody reactivity and working conditions may vary between species.

Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

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)
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.1 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

Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.

References

1. Carr, M.M. *et al*. (1994) Expression on porcine gamma/delta lymphocytes of a phylogenetically conserved surface antigen previously restricted in expression to ruminant gamma/delta T lymphocytes. Immunology 81: 36-40.
2. Howard, C.J. & Naessens, J. (1993) Summary of workshop findings for cattle. Vet Immunol Immunopathol. 39: 25-48.
3. MacHugh, N. *et al*. (1993) Clustering of monoclonal antibodies recognizing different members of the WC1 gene family. Vet Immunol Immunopathol. 39: 155-60.
4. Crocker, G. *et al*. (1993) Analysis of the gamma/delta T cell restricted antigen WC1. Vet Immunol Immunopathol. 39: 137-44.
5. Lund, B. *et al*. (1993) Expression of T19 (WC1) molecules by ovine lymphocytes. Vet Immunol Immunopathol. 39: 145-53.
6. Schröder, A.C. & Hamann, J. (2005) The influence of technical factors on differential cell count in milk. J Dairy Res. 72: 153-8.
7. Liu, X. *et al.* (2014) Crusted scabies is associated with increased IL-17 secretion by skin T cells. Parasite Immunol. 36: 594-604.
8. Patarroyo, J.H. *et al.* (2009) Immune response of bovines stimulated by synthetic vaccine SBm7462 against *Rhipicephalus (Boophilus) microplus*. Vet Parasitol. 166: 333-9.
9. 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.
10. 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.
11. 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.
12. Herry, V. *et al.* (2017) Local immunization impacts the response of dairy cows to *Escherichia coli* mastitis. Sci Rep. 7 (1): 3441.

Further Reading

1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.
2. 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.

Storage

Store at +4°C or at -20°C if preferred.

	This product should be stored undiluted. Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL:FITC (MCA929F)

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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