

Datasheet: MCA5953GA

BATCH NUMBER 163139

Description:	MOUSE ANTI BOVINE CD21
Specificity:	CD21
Other names:	CR2
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CC51
Isotype:	IgG2b
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	▪			1/25 - 1/200
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.

Target Species	Bovine
Species Cross Reactivity	<p>Reacts with: Pig, African Buffalo</p> <p>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.</p>
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 (NaN₃)

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0 mg/ml

Immunogen Bovine (Friesian cattle) mesenteric lymph node cells.

External Database Links **UniProt:**
[Q8HY44](#) [Related reagents](#)

Fusion Partners Spleen cells from immunized BALB/c mice were fused with cells of the mouse NSI myeloma cell line

Specificity **Mouse anti Bovine CD21 monoclonal antibody, clone CC51** recognizes the bovine homologue of the human CD21 cell surface antigen, a 145 kDa single pass type I membrane glycoprotein containing multiple [sushi](#) domains. CD21 is also known as complement receptor type 2 (CR2). In cattle CD21 expression is restricted to B-cells ([Naessens et al. 1990](#)). CD21 may be expressed on B-cells as either a long or a short form ([Pringle et al. 2012](#)).

Mouse anti Bovine CD21, clone CC51 demonstrates cross reactivity with porcine and provides a reliable marker for porcine B-Cells ([Sinkora et. al. 2013](#)). In addition to clone CC51, clone CC21 ([MCA1424GA](#)) which has been demonstrated to recognise CD21 in a range of ruminant and other species is also available from Bio-Rad.

Flow Cytometry Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul

References

1. Denham S. *et al.* (1994) Monoclonal antibodies recognising differentiation antigens on porcine B cells. [Vet Immunol Immunopathol. 43: 259-67.](#)
2. Boersma W.J. *et al.* (2001) Summary of workshop findings for porcine B-cell markers. [Vet Immunol Immunopathol. 80: 63-78.](#)
3. Tenaya I.W. *et al.* (2012) Flow cytometric analysis of lymphocyte subset kinetics in Bali cattle experimentally infected with Jembrana disease virus. [Vet Immunol Immunopathol. 149: 167-76.](#)
4. Sinkora, M *et al.* (2013) Different anti-CD21 antibodies can be used to discriminate developmentally and functionally different subsets of B lymphocytes in circulation of pigs. [Dev Comp Immunol. 39: 409-18.](#)
5. Sinkora, M. *et al.* (2014) The comparative profile of lymphoid cells and the T and B cell spectratype of germ-free piglets infected with viruses SIV, PRRSV or PCV2. [Vet Res. 45: 91.](#)
6. Liu, J. *et al.* (2020) *Theileria annulata*. transformation altered cell surface molecules

expression and endocytic function of monocyte-derived dendritic cells. [Ticks Tick Borne Dis. 11 \(3\): 101365.](#)

7. Li, J. *et al.* (2023) Single-cell transcriptomic analysis reveals transcriptional and cell subpopulation differences between human and pig immune cells. [Genes Genomics. Nov 18 \[Epub ahead of print\].](#)

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/MCA5953GA>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (H/L) (STAR117...) [DyLight@405](#), [DyLight@488](#), [DyLight@800](#),
[FITC](#)

Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)

Recommended Useful Reagents

[MOUSE ANTI PIG CD14:FITC \(MCA1218F\)](#)

[MOUSE ANTI PIG CD4 ALPHA \(MCA1749GA\)](#)

[RAT ANTI HUMAN CD3:Pacific Blue® \(MCA1477PB\)](#)

[MOUSE ANTI BOVINE CD25:RPE \(MCA2430PE\)](#)

[MOUSE ANTI PIG CD3:RPE \(MCA5951PE\)](#)

[MOUSE ANTI PIG SLA CLASS II DR:FITC \(MCA2314F\)](#)

[MOUSE ANTI PIG wCD8 ALPHA:RPE \(MCA1223PE\)](#)

[MOUSE ANTI BOVINE MHC CLASS II DR:RPE \(MCA5656PE\)](#)

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