

Datasheet: MCA1653A647

**BATCH NUMBER 147548**

<b>Description:</b>	MOUSE ANTI BOVINE CD4:Alexa Fluor® 647
<b>Specificity:</b>	CD4
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC8
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	100 TESTS/1ml

## 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](http://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.

<b>Target Species</b>	Bovine		
<b>Product Form</b>	Purified IgG conjugated to Alexa Fluor® 647 - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	Alexa Fluor®647	650	665
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide		
<b>Stabilisers</b>	1% Bovine Serum Albumin		
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05 mg/ml		

<b>Immunogen</b>	Bovine lymphocytes.
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">A7YY52</a> <a href="#">Related reagents</a>
<b>RRID</b>	AB_2077621
<b>Fusion Partners</b>	Spleen cells from an immunized mouse were fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Bovine CD4 antibody, clone CC8</b> recognizes bovine CD4, the homolog of human CD4 and immunoprecipitates a ~50 kDa molecule. The phenotype, tissue distribution and function of T-cells expressing the bovine CD4 antigen are similar to those in other species. However, expression on macrophages has not yet been detected. Clone CC8 has been reported as being suitable for use on formalin dichromate (FD5) fixed paraffin embedded tissue with amplification and antigen retrieval techniques (<a href="#">Eskra et al. 1991</a>).</p> <p>A mutation in the bovine CD4 gene resulting in an amino acid substitution at A324 T, located in the D4 domain of the CD4 gene product can occur. This mutation results in lowered binding of Mouse anti Bovine CD4 antibody, clone CC8 to CD4 in Japanese Black (JB) cattle where this mutation has been identified (<a href="#">Kato-Mori, et al., 2020</a>). CD4 in JB cattle can be identified using clone CACT138A (<a href="#">MCA6081</a>) whose binding to bovine CD4 is unaffected by the A324T mutation (<a href="#">Kato-Mori, et al., 2020</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Bensaid, A. &amp; Hadam, M. (1991) Individual antigens of cattle. Bovine CD4 (BoCD4). <a href="#">Vet Immunol Immunopathol. 27 (1-3): 51-4.</a></li> <li>2. Eskra, L. et al. (1991) Effect of monoclonal antibodies on <i>in vitro</i> function of T-cell subsets. <a href="#">Vet Immunol Immunopathol. 27 (1-3): 215-22.</a></li> <li>3. Howard, C.J. et al. (1991) Summary of workshop findings for leukocyte antigens of cattle. <a href="#">Vet Immunol Immunopathol. 27 (1-3): 21-7.</a></li> <li>4. Gutierrez, M. et al. (1999) The detection of CD2+, CD4+, CD8+, and WC1+ T lymphocytes, B cells and macrophages in fixed and paraffin embedded bovine tissue using a range of antigen recovery and signal amplification techniques. <a href="#">Vet Immunol Immunopathol. 71 (3-4): 321-34.</a></li> <li>5. Sidders, B. et al. (2008) Screening of highly expressed mycobacterial genes identifies Rv3615c as a useful differential diagnostic antigen for the <i>Mycobacterium tuberculosis</i> complex. <a href="#">Infect Immun. 76: 3932-9.</a></li> <li>6. Brackenbury, L.S. et al. (2005) Identification of a cell population that produces alpha/beta interferon <i>in vitro</i> and <i>in vivo</i> in response to noncytopathic bovine viral diarrhea virus. <a href="#">J Virol. 79: 7738-44.</a></li> <li>7. Buddle, B.M. et al. (2003) Revaccination of neonatal calves with <i>Mycobacterium bovis</i> BCG reduces the level of protection against bovine tuberculosis induced by a single vaccination. <a href="#">Infect Immun. 71: 6411-9.</a></li> <li>8. Gerner, W. et al. (2009) Identification of major histocompatibility complex restriction and</li> </ol>

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**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.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1653A647>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA929A647\)](#)

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