

Datasheet: MCA2228F

BATCH NUMBER 164595

Description:	MOUSE ANTI SHEEP MHC CLASS II DQ DR POLYMORPHIC:FITC
Specificity:	MHC CLASS II DQ DR POLYMORPHIC
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	49.1
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	▪			1/10

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	Sheep		
Species Cross Reactivity	Reacts with: Goat, Human, Bovine 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 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 A from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		

Preservative	0.09% sodium azide (NaN ₃)
Stabilisers	1% bovine serum albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
RRID	AB_567329
Specificity	<p>Mouse anti Sheep MHC class II Dq DR antibody, clone 49.1 recognizes a polymorphic epitope on ovine MHC class II DQ and DR molecules, constitutively expressed on antigen presenting cells including dendritic cells, B lymphocytes, monocytes, macrophages, activated T lymphocytes and may be induced on a range of other cell types by interferon gamma.</p> <p>The major histocompatibility complex (MHC) is a cluster of genes some of which are important in the immune response to infection. In sheep, this complex is referred to as the ovine leukocyte antigen (OLA) region. There are 2 major types of MHC class IIa molecules encoded by the OLA which are DR and DQ each composed of an alpha and beta chain.</p> <p>Mouse anti Sheep MHC class II Dq DR antibody, clone 49.1 recognizes ovine MHC II transfectants DQ - T28.1, DQ - T26.2 and DR - T31.3 but not DR - T8.1 (Ballingall <i>et al.</i> 1995).</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 1 x 10 ⁶ cells in 100µl
References	<ol style="list-style-type: none"> Puri, N.K. <i>et al.</i> (1987) Monoclonal antibodies to sheep MHC class I and class II molecules: biochemical characterization of three class I gene products and four distinct subpopulations of class II molecules. Vet Immunol Immunopathol. 15 (1-2): 59-86. Puri, N.K. & Brandon, M.R. (1987) Sheep MHC class II molecules. II. Identification and characterization of four distinct subsets of sheep MHC class II molecules. Immunology. 62 (4): 575-80. Puri, N.K. <i>et al.</i> (1987) Monoclonal antibodies to sheep MHC class II molecules recognize all HLA-D or subsets of HLA-D region products. Hum Immunol. 20 (3): 195-207. Ballingall, K.T. <i>et al.</i> (1995) Analysis of the fine specificities of sheep major histocompatibility complex class II-specific monoclonal antibodies using mouse L-cell transfectants. Anim Genet. 26 (2): 79-84. Kallapur, S.G. <i>et al.</i> (2011) Pulmonary and systemic inflammatory responses to intra-amniotic IL-1α in fetal sheep. Am J Physiol Lung Cell Mol Physiol. 301 (3): L285-95. Gorrell, M.D. <i>et al.</i> (1988) Lymphocyte phenotypes in the intestinal mucosa of sheep infected with <i>Trichostrongylus colubriformis</i>. Clin Exp Immunol. 72 (2): 274-9. Stenfeldt, C. <i>et al.</i> (2015) Clinical and virological dynamics of a serotype O 2010 South East Asia lineage foot-and-mouth disease virus in sheep using natural and simulated natural inoculation and exposure systems. Vet Microbiol. 178 (1-2): 50-60. Stenfeldt, C. <i>et al.</i> (2015) Pathogenesis of Primary Foot-and-Mouth Disease Virus Infection in the Nasopharynx of Vaccinated and Non-Vaccinated Cattle. PLoS One. 10 (11): e0143666. Stenfeldt, C. <i>et al.</i> (2016) The Foot-and-Mouth Disease Carrier State Divergence in

Cattle. [J Virol. 90 \(14\): 6344-64.](#)

10. Stenfeldt, C. *et al.* (2019) Virulence beneath the fleece; a tale of foot-and-mouth disease virus pathogenesis in sheep. [PLoS One. 14 \(12\): e0227061.](#)

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. This product is photosensitive and should be protected from light.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2228F>
10041

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:FITC \(MCA929F\)](#)

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