

Datasheet: MCA2228F

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 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	Sheep		
Species Cross Reactivity	Reacts with: Goat, Human, Bovine 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 A from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml		

Specificity

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.

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.

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 et al. 1995](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

References

1. Puri, N.K. *et al.* (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.](#)
2. 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.](#)
3. Puri, N.K. *et al.* (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.](#)
4. Ballingall, K.T. *et al.* (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.](#)
5. Kallapur, S.G. *et al.* (2011) Pulmonary and systemic inflammatory responses to intra-amniotic IL-1 α in fetal sheep. [Am J Physiol Lung Cell Mol Physiol. 301 \(3\): L285-95.](#)
6. Gorrell, M.D. *et al.* (1988) Lymphocyte phenotypes in the intestinal mucosa of sheep infected with *Trichostrongylus colubriformis*. [Clin Exp Immunol. 72 \(2\): 274-9.](#)
7. Stenfeldt, C. *et al.* (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.](#)
8. Stenfeldt, C. *et al.* (2015) Pathogenesis of Primary Foot-and-Mouth Disease Virus Infection in the Nasopharynx of Vaccinated and Non-Vaccinated Cattle. [PLoS One. 10 \(11\): e0143666.](#)
9. Stenfeldt, C. *et al.* (2016) The Foot-and-Mouth Disease Carrier State Divergence in Cattle. [J Virol. 90 \(14\): 6344-64.](#)

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 Tel: +1 800 265 7376

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'M302067:170109'

Printed on 01 May 2018

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