

## Datasheet: MCA2218F

**BATCH NUMBER 1707**

<b>Description:</b>	MOUSE ANTI SHEEP CD25:FITC
<b>Specificity:</b>	CD25
<b>Other names:</b>	IL-2R ALPHA CHAIN
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	9.14
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](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>	Sheep		
<b>Product Form</b>	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	FITC	490	525
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G 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</b>	IgG concentration 0.1 mg/ml		

## Concentrations

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### External Database

#### Links

#### UniProt:

[P26898](#)

[Related reagents](#)

#### Entrez Gene:

[443435](#)

IL2RA

[Related reagents](#)

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#### RRID

AB\_2125624

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#### Fusion Partners

Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.

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#### Specificity

**Mouse anti sheep CD25, clone 9.14** recognizes the ovine homologue of human CD25, also known as interleukin-2 receptor alpha chain (IL-2R $\alpha$ ), a single pass type I membrane protein expressed by activated ovine T-cells.

Ovine Interleukin-2 is a cytokine involved in the proliferation, growth and differentiation of T-cells, B-cells and NK cells and its receptor is composed of 3 subunits, an  $\alpha$  chain (CD25), a  $\beta$  chain (CD122) and a  $\gamma$  chain (CD132). A non-covalent association of the  $\alpha$  and  $\beta$  subunits is required to form the high affinity receptor for IL-2.

Mouse anti sheep CD25, clone 9.14 immunoprecipitates a band of ~47 kDa under reducing conditions, as expected for the mature protein due to high glycosylation, consistent with the observed molecular weight of IL-2R $\alpha$  in other species including humans ([Verhagen et al. 1993](#)).

Antibodies to CD4, FoxP3 and CD25 may be used in studies of T regulatory cells (T-regs), a unique subset of T helper cells that function in the control of effector cells vital in preventing autoimmunity ([Rocchi et al. 2011](#)).

Mouse anti sheep CD25, clone 9.14 is one of a wide range of monoclonal antibodies available from Bio-Rad for ovine research and provides an important tool for the identification of ovine CD25 and may be of use in facilitating further studies of T-regs in this species.

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#### Flow Cytometry

Use 10ul of the suggested working dilution to label  $1 \times 10^6$  cells in 100ul.

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#### References

1. Newland, A. *et al.* (2004) Ovine dendritic cells transduced with an adenoviral CTLA4eEGFP fusion protein construct induce hyporesponsiveness to allostimulation [Immunology 113: 310-7.](#)
2. Gillan, S. *et al.* (2010) Identification of immune parameters to differentiate disease states among sheep infected with *Mycobacterium avium* subsp. *paratuberculosis*. [Clin Vaccine Immunol. 17: 108-17.](#)
3. Gillan, S. *et al.* (2010) Ovine immune parameters following immunisation against *Mycobacterium avium* ssp. *paratuberculosis* using a lipid-based live-cell vaccine. [Vet Immunol Immunopathol. 137 \(1-2\): 109-19.](#)

4. Piero, B. *et al.* (2016) Peripheral Blood and Milk Leukocytes Subsets of Lactating Sarda Ewes [It J Anim Sci. 12 \(2\): e34.](#)
5. Willems, M.G. *et al.* (2016) Systemic interleukin-2 administration improves lung function and modulates chorioamnionitis-induced pulmonary inflammation in the ovine fetus. [Am J Physiol Lung Cell Mol Physiol. 310 \(1\): L1-7.](#)
6. Lebedev, M. *et al.* (2021) Myeloid-like  $\gamma\delta$  T cell subset in the immune response to an experimental Rift Valley fever vaccine in sheep [Veterinary Immunology and Immunopathology. : 110184.](#)

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**Further Reading** 1. Rocchi, M.S. *et al.* (2011) Identification of CD4+CD25 high Foxp3+ T cells in ovine peripheral blood. [Vet Immunol Immunopathol. 144 \(1-2\): 172-7.](#)

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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/MCA2218F>  
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**Regulatory** For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto: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](mailto:antibody_sales_de@bio-rad.com)

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

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