

Datasheet: MCA5933GA

Description:	MOUSE ANTI SHEEP CD335
Specificity:	CD335
Other names:	Gr13.1, NKp46
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	EC1.1
Isotype:	IgG1
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 (1)	▪			
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.

(1) Mouse anti Sheep CD335 antibody, clone EC1.1 is suitable for use on paraffin sections when fixed with zinc salts Results may be enhanced by the use of a using TSA (Tyramide Signal Amplification) biotin signal enhancement system.

Target Species	Sheep
Species Cross Reactivity	<p>Reacts with: Bovine, Goat</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 (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	OvNKp46-mFcγ2b fusion protein
External Database Links	<p>UniProt:</p> <p>E5LDC2 Related reagents</p> <p>Q863H2 Related reagents</p> <p>Entrez Gene:</p> <p>369024 NCR1 Related reagents</p>
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the X63 myeloma cell line
Specificity	<p>Mouse anti Sheep CD335, clone EC1.1, recognizes the ovine homologue of human CD335, also known as NKp46 and Natural cytotoxicity triggering receptor 1.</p> <p>CD335 is a type I transmembrane protein, with two extracellular C2-type immunoglobulin-like domains, which function as an activating receptor.</p> <p>Research has indicated that, in mammals, the CD335 antigen is confined to NK cells (Westergard et. al. 2004) and that it is primarily expressed by a subset of natural killer (NK) cells which are CD3^{-ve}, CD4^{-ve} and CD2^{+ve} with a small population also being CD8^{+ve} (Storset et. al. 2004). No expression of CD335 has been detected on B cells, T cells, monocytes or granulocytes.</p> <p>NK cells are cytotoxic and form a key component of the innate immune system where they are involved in mediating immunity to tumours and pathogens and in particular are critical to the process where the host recognizes and rejects tumour and viral infected cells.</p> <p>Clone EC1.1 (originally named as Gr13.1) is the first antibody specifically raised to ovine CD335 and provides a reagent enabling researchers to identify ovine NKp46 positive NK cells and may facilitate an increased understanding of the ovine immune system and in particular its role in host pathogen defence (Connelley et. al. 2011).</p>

In addition to clone EC1.1, clones AKS1, which recognises CD335 (NKp46) in bovine and other ruminants, and VIV-KM1, which recognizes porcine CD335, are also available from Bio-Rad.

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

References

1. Connelley, T. *et al.* (2011) NKp46 defines ovine cells that have characteristics corresponding to NK cells. [Vet Res. 42: 37.](#)
2. Olsen, L. *et al.* (2013) Characterization of NCR1+ cells residing in lymphoid tissues in the gut of lambs indicates that the majority are NK cells [Vet Res. 44:109.](#)
3. Goh, S. *et al.* (2016) Identification of *Theileria lestoquardi* Antigens Recognized by CD8+ T Cells. [PLoS One. 11 \(9\): e0162571.](#)
4. Marzo, S. *et al.* (2021) Characterisation of dendritic cell frequency and phenotype in bovine afferent lymph reveals kinetic changes in costimulatory molecule expression [Vet Immunol Immunopathol. 19 Nov: 110363.](#)
5. Kolar, Q.K. *et al.* (2020) Anatomical distribution of respiratory tract leukocyte cell subsets in neonatal calves. [Vet Immunol Immunopathol. 227: 110090.](#)

Further Reading

1. Elhmouzi-Younes, J. *et al.* (2010) Ovine CD16+/CD14- blood lymphocytes present all the major characteristics of natural killer cells. [Vet Res. 41:4](#)
2. Storset, A. K. *et al.* (2004) NKp46 defines a subset of bovine leukocytes with natural killer cell characteristics. [Eur J Immunol. 34:669-676](#)
3. Westgaard, I.H. *et al.* (2004) Rat NKp46 activates natural killer cell cytotoxicity and is associated with FcepsilonRIgamma and CD3zeta. [J Leukoc Biol. 76 \(6\): 1200-6.](#)
4. Boysen, P. *et al.* (2011) Natural killer cells in free-living *Mus musculus* have a primed phenotype. [Mol Ecol. 20 \(23\): 5103-10.](#)

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

Acknowledgements The Renaissance TSA Biotin system is a registered trademark of PerkinElmer, Waltham, USA

Health And Safety Information Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA5933GA> 10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) [HRP](#)
 Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
 Goat Anti Mouse IgG (STAR70...) [FITC](#)
 Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
 Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
 Goat Anti Mouse IgG (STAR76...) [RPE](#)
 Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
 Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
 Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),
[FITC](#), [HRP](#)

Recommended Useful Reagents

[MOUSE ANTI HUMAN CD16 \(MCA5665GA\)](#)
[MOUSE ANTI HUMAN CD16:FITC \(MCA5665F\)](#)
[MOUSE ANTI HUMAN CD16:RPE \(MCA5665PE\)](#)
[MOUSE ANTI SHEEP CD16-Like \(MCA919GA\)](#)
[RAT ANTI HUMAN CD3:Pacific Blue® \(MCA1477PB\)](#)
[RAT ANTI HUMAN CD3:FITC \(MCA1477F\)](#)
[MOUSE ANTI BOVINE CD205 \(MCA1651GA\)](#)
[MOUSE ANTI BOVINE CD205:FITC \(MCA1651F\)](#)

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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
 'M404488:220830'

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