

Datasheet: MCA2289PET

# **BATCH NUMBER INN1701**

Description:	RAT ANTI MOUSE DECTIN-1:RPE	
Specificity:	DECTIN-1	
Format:	RPE	
Product Type:	Monoclonal Antibody	
Clone:	2A11	
Isotype:	lgG2b	
Quantity:	25 TESTS	

# **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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	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.

Target Species	Mouse				
Product Form	Purified IgG conjugat	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilise			
Reconstitution		5ml distilled water n during reconstitution o-Rad recommend tha			
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm		
	RPE 488nm laser	496	578		
Preparation	Purified IgG prepared supernatant	d by affinity chromatog	raphy on Protein G		
Buffer Solution	Phosphate buffered saline				
Preservative Stabilisers	0.09% Sodium Azide				

1% Bovine Serum Albumin

5% Sucrose

### Immunogen

Dectin-1 transfected NIH3T3 cells and recombinant soluble Dectin-1.

# External Database

### Links

### **UniProt:**

Q6QLQ4 Related reagents

#### **Entrez Gene:**

56644 Clec7a Related reagents

#### **Synonyms**

Bgr, Clecsf12, Dectin1

#### **RRID**

AB\_1100480

### **Fusion Partners**

Spleen cells from immunised Fischer rats were fused with cells of the rat Y3 myeloma cell line

# **Specificity**

Rat anti Mouse Dectin-1 antibody, clone 2A11 recognizes murine beta-glucan receptor, also known as Dectin-1.Dectin-1 is predominantly expressed by cells of the monocyte/macrophage and neutrophil lineages, but also at lower levels by dendritic cells and a subpopulation of T cells.

As a major leucocyte receptor for beta-glucan this molecule may have a key role in the immunomodulatory effects of beta-glucans and in the host response to fungal pathogens. Dectin-1 may stimulate reactive oxygen production in macropahges via the protein tyrosine kinase known as Syk.

Rat anti Mouse Dectin-1 antibody, clone 2A11 inhibits the binding of zymosan to macrophages via the beta-glucan receptor.

# Flow Cytometry

Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul

# References

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- 4. Underhill, D.M. *et al.* (2005) Dectin-1 activates Syk tyrosine kinase in a dynamic subset of macrophages for reactive oxygen production. <u>Blood. 106 (7): 2543-50.</u>
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- 6. Fei, M. et al. (2011) TNF-alpha from inflammatory dendritic cells (DCs) regulates lung

- IL-17A/IL-5 levels and neutrophilia versus eosinophilia during persistent fungal infection. Proc Natl Acad Sci U S A. 108 (13): 5360-5.
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- 8. McDonald, J.U. *et al.* (2011) *In vivo* functional analysis and genetic modification of *in vitro*-derived mouse neutrophils. FASEB J. 25 (6): 1972-82.
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- 12. Dioszeghy, V. *et al.* (2008) 12/15-Lipoxygenase regulates the inflammatory response to bacterial products *in vivo*. <u>J Immunol. 181: 6514-24.</u>
- 13. Hohl, T.M. (2008) Caspofungin modulates inflammatory responses to *Aspergillus fumigatus* through stage-specific effects on fungal beta-glucan exposure. <u>J Infect Dis. 198:</u> 176-85.
- 14. Palma, A.S. *et al.* (2006) Ligands for the beta-glucan receptor, Dectin-1, assigned using "designer" microarrays of oligosaccharide probes (neoglycolipids) generated from glucan polysaccharides. J Biol Chem. 281: 5771-9.
- 15. Sindrilaru, A. *et al.* (2011) An unrestrained proinflammatory M1 macrophage population induced by iron impairs wound healing in humans and mice. <u>J Clin Invest. 121:</u> 985-97.
- 16. Anandasabapathy, N. *et al.* (2011) Flt3L controls the development of radiosensitive dendritic cells in the meninges and choroid plexus of the steady-state mouse brain. <u>J Exp Med.</u> 208 (8): 1695-705.
- 17. Takahara, K. *et al.* (2012) Efficient capture of *Candida albicans* and zymosan by SIGNR1 augments TLR2-dependent TNF-α production. <u>Int Immunol. 24 (2): 89-96.</u>
- 18. Fransen F *et al.* (2015) BALB/c and C57BL/6 Mice Differ in Polyreactive IgA Abundance, which Impacts the Generation of Antigen-Specific IgA and Microbiota Diversity. Immunity. 43 (3): 527-40.
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regression in synergy with TLR9 agonist via dendritic cell-mediated immunity. <u>J Leukoc</u> Biol. 98 (6): 1015-25.

26. Baldwin, K.T. *et al.* (2015) Neuroinflammation triggered by β-glucan/dectin-1 signaling enables CNS axon regeneration. <u>Proc Natl Acad Sci U S A. 112 (8): 2581-6.</u>

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28. Chang, T.H. *et al.* (2017) Dectin-2 is a primary receptor for NLRP3 inflammasome activation in dendritic cell response to *Histoplasma capsulatum*. <u>PLoS Pathog. 13 (7):</u> e1006485.

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Store at +4°C.

#### DO NOT FREEZE

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee	12 months from date of despatch		
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2289PET">https://www.bio-rad-antibodies.com/SDS/MCA2289PET</a> 20487		
Regulatory	For research purposes only		

# Related Products

# **Recommended Useful Reagents**

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Europe

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Email: antibody\_sales\_uk@bio-rad.com

Email: 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 'M375753:210107'

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