Datasheet: MCA2289FB BATCH NUMBER 1701

Description:	RAT ANTI MOUSE DECTIN-1:FITC
Specificity:	DECTIN-1
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	2A11
lsotype:	lgG2b
Quantity:	0.5 mg

Product Details

Applications	derived from testing wi communications from t information. For genera	thin our labora the originators al protocol rec	atories, . Please	peer-reviewed publi e refer to references	indicated for further
	rad-antibodies.com/pro	<u>otocols</u> . Yes	No	Not Determined	Suggested Dilution
	Flow Cytometry	•	NO	Not Determined	1/5 - 1/50
	•	use in such p nmended that	the use	res. Suggested work er titrates the antiboo	echnique this does not king dilutions are given as dy for use in their own
Target Species	Mouse				
Product Form	Purified IgG conjugated	d to Fluoresce	ein Isoth	iocyanate Isomer 1	(FITC) - liquid
Max Ex/Em	Fluorophore	Excitation Ma	x (nm)	Emission Max (nm)	
	FITC	490		525	_
Preparation	Purified IgG prepared I supernatant	by affinity chro	omatogr	aphy on Protein G fi	rom tissue culture
Buffer Solution	Phosphate buffered sa	line			
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum A	Albumin			
Approx. Protein Concentrations	IgG concentration 0.5 r	mg/ml			

External Database Links	UniProt: <u>Q6QLQ4</u> <u>Related reagents</u>
	Entrez Gene: <u>56644</u> Clec7a <u>Related reagents</u>
Synonyms	Bgr, Clecsf12, Dectin1
RRID	AB_566382
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 ⁶ cells in 100ul
References	 Brown, G.D. <i>et al.</i> (2002) Dectin-1 is a major beta-glucan receptor on macrophages. J Exp Med. 196 (3): 407-12. Taylor, P.R. <i>et al.</i> (2002) The beta-glucan receptor, dectin-1, is predominantly expressed on the surface of cells of the monocyte/macrophage and neutrophil lineages. J Immunol. 169 (7): 3876-82.
	 Reid, D.M. <i>et al.</i> (2004) Expression of the beta-glucan receptor, Dectin-1, on murine leukocytes in situ correlates with its function in pathogen recognition and reveals potential roles in leukocyte interactions. J Leukoc Biol. 76 (1): 86-94. Underhill, D.M. <i>et al.</i> (2005) Dectin-1 activates Syk tyrosine kinase in a dynamic subset of macrophages for reactive oxygen production. Blood. 106 (7): 2543-50. Lefevre,L. <i>et al.</i> (2010) PPARc Ligands Switched High Fat Diet-Induced Macrophage M2b Polarization toward M2a Thereby Improving Intestinal <i>Candida</i> Elimination PLoS One. 5(9):e12828. Fei, M. <i>et al.</i> (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. Gazi, U. <i>et al.</i> (2011) Fungal Recognition Enhances Mannose Receptor Shedding

through Dectin-1 Engagement. J Biol Chem. 286: 7822-9.

8. McDonald, J.U. *et al.* (2011) *In vivo* functional analysis and genetic modification of *in vitro*-derived mouse neutrophils. <u>FASEB J. 25 (6): 1972-82.</u>

9. Dewals, B.G. *et al.* (2010) IL-4Ralpha-independent expression of mannose receptor and Ym1 by macrophages depends on their IL-10 responsiveness. <u>PLoS Negl Trop Dis. 4:</u> <u>e689.</u>

10. Galès, A. *et al.* (2010) PPARgamma controls dectin-1 expression required for host antifungal defense against *Candida albicans*. <u>PLoS Pathog. 6: e1000714.</u>

11. Coates, P.J. *et al.* (2008) Indirect macrophage responses to ionizing radiation: implications for genotype-dependent bystander signaling. <u>Cancer Res. 68: 450-6.</u>

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> <u>176-85.</u>

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> <u>985-97.</u>

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</u> <u>Med. 208 (8): 1695-705.</u>

17. Takahara, K. *et al.* (2012) Efficient capture of *Candida albicans* and zymosan by SIGNR1 augments TLR2-dependent TNF-α production. Int Immunol. 24 (2): 89-96.
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.

19. Urso, K. *et al.* (2016) Anion Exchanger 2 Regulates Dectin-1-Dependent Phagocytosis and Killing of *Candida albicans*. <u>PLoS One. 11 (7): e0158893.</u>

20. Zhou, J. *et al.* (2016) Therapeutic targeting of myeloid-derived suppressor cells involves a novel mechanism mediated by clusterin. <u>Sci Rep. 6: 29521.</u>

21. Pinke, K.H. *et al.* (2016) Mast cells phagocyte *Candida albicans* and produce nitric oxide by mechanisms involving TLR2 and Dectin-1. <u>Immunobiology. 221 (2): 220-7.</u>

22. Berven, L. *et al.* (2015) Particulate yeast β -glucan is internalized by RAW 264.7 macrophages and reduces the activity of the tumor-associated protease legumain <u>Bioactive Carbohydrates and Dietary Fibre. 6 (1): 15-23.</u>

23. Walachowski, S. *et al.* (2016) Triggering Dectin-1-Pathway Alone Is Not Sufficient to Induce Cytokine Production by Murine Macrophages. <u>PLoS One. 11 (2): e0148464.</u>
24. Ferguson, B.J. *et al.* (2015) The *Schistosoma mansoni* T2 ribonuclease omega-1

modulates inflammasome-dependent IL-1 β secretion in macrophages. Int J Parasitol. 45 (13): 809-13.

25. Masuda, Y. *et al.* (2015) Soluble β-glucan from *Grifola frondosa* induces tumor regression in synergy with TLR9 agonist via dendritic cell-mediated immunity. <u>J Leukoc Biol. 98 (6): 1015-25.</u>

26. Baldwin, K.T. et al. (2015) Neuroinflammation triggered by β -glucan/dectin-1 signaling

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		 systemic <i>C. albicans.</i> infection is dependent on collaboration between C-type lectin-like receptors. <u>PLoS Pathog. 15 (6): e1007850.</u> 31. Uno, A. <i>et al.</i> (2021) A novel β-glucan-oligonucleotide complex selectively delivers siRNA to APCs via Dectin-1. <u>J Control Release. 338: 792-803.</u> 32. Deerhake, M.E. <i>et al.</i> (2021) Dectin-1 limits autoimmune neuroinflammation and promotes myeloid cell-astrocyte crosstalk via Card9-independent expression of Oncosta 					
		 29. Seo, B.S. <i>et al.</i> (2016) Dectin-1 agonist selectively induces IgG1 class switching by LPS-activated mouse B cells. <u>Immunol Lett. 178: 114-21.</u> 30. Thompson, A. <i>et al.</i> (2019) The protective effect of inflammatory monocytes during 					
		<u>198-208.</u> 28. Chang, T.H.	. et al. (2	, , ,	ary receptor	r for NLRP3 inflammasome atum. <u>PLoS Pathog. 13 (7):</u>	
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