

Datasheet: MCA2415

BATCH NUMBER 174321

Description:	RAT ANTI MOUSE DECTIN-2
Specificity:	DECTIN-2
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	D2.11E4
Isotype:	IgG2a
Quantity:	0.25 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)	▪			1/10 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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.

(1)Membrane permeabilization is required for this application. Bio-Rad recommends the use of the Fixation buffer ([BUF071](#)) and ICS Perm/Wash buffer ([BUF072](#)) for this purpose.

Target Species	Mouse
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline

Preservative Stabilisers	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Dectin-2 (extracellular domain) Fc Fusion protein.
External Database Links	UniProt: Q9JKF4 Related reagents Entrez Gene: 56620 Clec4n Related reagents
Synonyms	Clec4n, Clecsf10, Dectin2
RRID	AB_567286
Specificity	Rat anti Mouse Dectin-2 antibody, clone D2.11E4 recognizes mouse DC-associated C-type lectin-2 (Dectin-2), a type II transmembrane protein that is a member of the C-type lectin superfamily. In mouse, dectin-2 is predominantly expressed on tissue macrophages and some dendritic cells. Clone D2.11E4 does not stain brain microglia or meningeal macrophages. Significant expression of Dectin-2 has been reported on macrophages in the red pulp and marginal zones of the spleen, kupffer cells in the liver and alveolar macrophages in the lung. Peripheral blood monocytes express low levels of dectin-2 but transient up-regulation of expression has been demonstrated on monocytes at sites of inflammation. Dectin-2 binds high mannose carbohydrates and appears to play a role in immune surveillance against fungal pathogens such as <i>Candida albicans</i> (Goyal et al. 2018).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. Robinson, M. <i>et al.</i> (2009) Dectin-2 is a Syk-coupled pattern recognition receptor crucial for Th17 responses to fungal infection. J Exp Med. 206:2037-51. 2. Ritter, M. <i>et al.</i> (2010) <i>Schistosoma mansoni</i> triggers Dectin-2, which activates the Nlrp3 inflammasome and alters adaptive immune responses. Proc Natl Acad Sci U S A. 107: 20459-64. 3. Suram, S. <i>et al.</i> (2010) Pathways regulating cytosolic phospholipase A2 activation and eicosanoid production in macrophages by <i>Candida albicans</i>. J Biol Chem. 285: 30676-85. 4. Barrett, N.A. <i>et al.</i> (2011) Dectin-2 mediates Th2 immunity through the generation of cysteinyl leukotrienes. J Exp Med. 208: 593-604. 5. McDonald, J.U. <i>et al.</i> (2012) Differential dependencies of monocytes and neutrophils on dectin-1, dectin-2 and complement for the recognition of fungal particles in inflammation.

[PLoS One. 7: e45781.](#)

6. Pugholm, L.H. *et al.* (2015) *In vitro* Assay for Screening of Optimal Targets for Antigen-Delivery to Murine Dendritic Cells. [Scand J Immunol. 82 \(6\): 498-505.](#)
7. Roth, S. *et al.* (2016) Vav Proteins Are Key Regulators of Card9 Signaling for Innate Antifungal Immunity. [Cell Rep. 17 \(10\): 2572-83.](#)
8. Lee, M.J. *et al.* (2016) Phosphoinositide 3-Kinase δ Regulates Dectin-2 Signaling and the Generation of Th2 and Th17 Immunity. [J Immunol. 197 \(1\): 278-87.](#)
9. Xiao, Y. *et al.* (2016) Targeting CBLB as a potential therapeutic approach for disseminated candidiasis. [Nat Med. 22 \(8\): 906-14.](#)
10. Chang, T.H. *et al.* (2017) Dectin-2 is a primary receptor for NLRP3 inflammasome activation in dendritic cell response to *Histoplasma capsulatum*. [PLoS Pathog. 13 \(7\): e1006485.](#)
11. Simons, B. *et al.* (2017) PGI2 Controls Pulmonary NK Cells That Prevent Airway Sensitization to House Dust Mite Allergen. [J Immunol. 198 \(1\): 461-71.](#)
12. Griffiths, J.S. *et al.* (2018) Differential susceptibility of Dectin-1 isoforms to functional inactivation by neutrophil and fungal proteases. [FASEB J. 32 \(6\): 3385-97.](#)
13. Thompson, A. *et al.* (2019) The protective effect of inflammatory monocytes during systemic *C. albicans* infection is dependent on collaboration between C-type lectin-like receptors. [PLoS Pathog. 15 \(6\): e1007850.](#)
14. Jaiswal, A.K. *et al.* (2020) Pyruvate kinase M2 in lung APCs regulates Alternaria-induced airway inflammation. [Immunobiology. 225 \(4\): 151956.](#)

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
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2415
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®550 , DyLight®650 , DyLight®800
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR17...)	FITC

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL \(MCA1212\)](#)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M383762:210513'

Printed on 21 Aug 2026

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