

Datasheet: MCA2415EL

BATCH NUMBER 1806

Description:	RAT ANTI MOUSE DECTIN-2:Low Endotoxin
Specificity:	DECTIN-2
Format:	Low Endotoxin
Product Type:	Monoclonal Antibody
Clone:	D2.11E4
Isotype:	IgG2a
Quantity:	0.5 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	None present
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Dectin-2 (extracellular domain) Fc Fusion protein.
External Database Links	<p>UniProt: Q9JKF4 Related reagents</p> <p>Entrez Gene: 56620 Clec4n Related reagents</p>
Synonyms	Clec4n, Clecsf10, Dectin2
RRID	AB_567285
Specificity	<p>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.</p> <p>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.</p> <p>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).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> 1. Taylor, P.R. <i>et al.</i> (2005) Dectin-2 is predominantly myeloid restricted and exhibits unique activation-dependent expression on maturing inflammatory monocytes elicited <i>in vivo</i>. Eur J Immunol. 35 (7): 2163-74. 2. 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. 3. 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. 4. 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. 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. Ritter, M. *et al.* (2010) *Schistosoma mansoni* triggers Dectin-2, which activates the Nlrp3 inflammasome and alters adaptive immune responses. [Proc Natl Acad Sci U S A. 107: 20459-64.](#)

7. 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.](#)

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. Jul 18. \[Epub ahead of print\]](#)

10. Roth, S. *et al.* (2016) Vav Proteins Are Key Regulators of Card9 Signaling for Innate Antifungal Immunity [Cell Reports. 17 \(10\): 2572-83.](#)

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. 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.](#)

13. 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.](#)

14. 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.](#)

15. Jaiswal, A.K. *et al.* (2020) Pyruvate kinase M2 in lung APCs regulates Alternaria-induced airway inflammation. [Immunobiology. 225 \(4\): 151956.](#)

Storage

Store at -20°C only.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. 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 #10162 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2415EL>
10162

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)

[DyLight®800](#)

Rabbit Anti Rat IgG (STAR17...)

[FITC](#)

Goat Anti Rat IgG (STAR72...)

[HRP](#)

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

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:Low Endotoxin \(MCA1212EL\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: 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	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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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
'M366859:200529'

Printed on 19 Jan 2024

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