

## Datasheet: MCA4661PE

|                      |                               |
|----------------------|-------------------------------|
| <b>Description:</b>  | MOUSE ANTI HUMAN DECTIN-1:RPE |
| <b>Specificity:</b>  | DECTIN-1                      |
| <b>Other names:</b>  | BETA GLUCAN RECEPTOR, CD369   |
| <b>Format:</b>       | RPE                           |
| <b>Product Type:</b> | Monoclonal Antibody           |
| <b>Clone:</b>        | GE2                           |
| <b>Isotype:</b>      | IgG1                          |
| <b>Quantity:</b>     | 100 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 [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

|                | Yes | No | Not Determined | Suggested Dilution |
|----------------|-----|----|----------------|--------------------|
| Flow Cytometry | ▪   |    |                | Neat               |

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.

|                        |   |                            |                          |
|------------------------|---|----------------------------|--------------------------|
| <b>Target Species</b>  | Human   |                            |                          |
| <b>Product Form</b>    | Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized                               |                            |                          |
| <b>Reconstitution</b>  | Reconstitute with 1ml distilled water   |                            |                          |
| <b>Max Ex/Em</b>       | <b>Fluorophore</b>  | <b>Excitation Max (nm)</b> | <b>Emission Max (nm)</b> |
|                        | RPE 488nm laser   | 496                        | 578                      |
| <b>Preparation</b>     | Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant |                            |                          |
| <b>Buffer Solution</b> | Phosphate buffered saline   |                            |                          |
| <b>Preservative</b>    | 0.09% Sodium Azide (NaN <sub>3</sub> )  |                            |                          |
| <b>Stabilisers</b>     | 1% Bovine Serum Albumin   |                            |                          |
|                        | 5% Sucrose  |                            |                          |

**Immunogen** NIH3T3 cells expressing full length Beta-glucan receptor.

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**External Database**

**Links**

**UniProt:**

[Q9BXN2](#) [Related reagents](#)

**Entrez Gene:**

[64581](#) CLEC7A [Related reagents](#)

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**Synonyms**

BGR, CLECSF12, DECTIN1

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**RRID**

AB\_2021024

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**Fusion Partners**

Spleen cells from immunized C57BL/6 mice were fused with cells of the murine SP2 myeloma cell line.

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**Specificity**

**Mouse anti Human Dectin-1 antibody, clone GE2** recognizes human Dectin-1, also known as beta-glucan receptor ( $\beta$ GR), a C-type lectin domain family member. It is a major pathogen pattern-recognition receptor that binds beta-glucans, glucose polymers that form cell-wall components or exopolymers of yeasts, fungi and some bacteria. Beta-glucans have also been used experimentally and therapeutically as immunomodulators that enhance resistance to bacterial, yeast, viral and protozoan infections, as well as tumor formation. Dectin-1 also acts as a co-stimulatory molecule on T-cells to induce their proliferation and is necessary for the TLR2-mediated inflammatory response. It is highly expressed on peripheral blood leukocytes and dendritic cells.

Human Dectin-1 has two major ( $\beta$ GR-A and  $\beta$ GR-B) and several minor isoforms.  $\beta$ GR-A and  $\beta$ GR-B differ by the presence and absence, respectively, of a stalk region. Mouse anti Human Dectin-1 antibody, clone GE2 recognizes both major isoforms. Clone GE2 could be used to inhibit receptor function.

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**Flow Cytometry**

Use 10ul of the suggested working dilution to label  $1 \times 10^6$  cells in 100ul.

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**References**

1. Harnack, U. *et al.* (2011) Yeast-derived beta-(1-3),(1-6)-D-glucan induces up-regulation of CD86 on dectin-1-positive human B-lymphoma cell lines. [Anticancer Res. 31 \(12\): 4195-9.](#)
2. Kyrnizi, I. *et al.* (2013) Corticosteroids block autophagy protein recruitment in *Aspergillus fumigatus* phagosomes via targeting dectin-1/Syk kinase signaling. [J Immunol. 191 \(3\): 1287-99.](#)
3. Loures, F.V. *et al.* (2015) Recognition of *Aspergillus fumigatus* hyphae by human plasmacytoid dendritic cells is mediated by dectin-2 and results in formation of extracellular traps. [PLoS Pathog. 11 \(2\): e1004643.](#)
4. Ali, M.F. *et al.* (2017) Canonical Stimulation of the NLRP3 Inflammasome by Fungal Antigens Links Innate and Adaptive B-Lymphocyte Responses by Modulating IL-1 $\beta$  and IgM Production. [Front Immunol. 8: 1504.](#)
5. Kan, B. *et al.* (2018) Cellular metabolism constrains innate immune responses in early human ontogeny. [Nat Commun. 9 \(1\): 4822.](#)
6. de Quaglia E Silva. J.C.*et al.* (2019) Involvement of the Dectin-1 Receptor upon the

Effector Mechanisms of Human Phagocytic Cells against *Paracoccidioides brasiliensis*. [J Immunol Res. 2019: 1529189.](#)

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|--------------------------------------|--|
| <b>Storage</b>                       | Prior to reconstitution store at +4°C.<br>After reconstitution store at +4°C.<br>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. |
| <b>Guarantee</b>                     | 12 months from date of despatch  |
| <b>Health And Safety Information</b> | Material Safety Datasheet documentation #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA4661PE">https://www.bio-rad-antibodies.com/SDS/MCA4661PE</a><br>20487  |
| <b>Regulatory</b>                    | For research purposes only   |

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## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

|                                  |   |                  |   |               |   |
|----------------------------------|---|------------------|---|---------------|---|
| <b>North &amp; South America</b> | Tel: +1 800 265 7376<br>Fax: +1 919 878 3751<br>Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a> | <b>Worldwide</b> | Tel: +44 (0)1865 852 700<br>Fax: +44 (0)1865 852 739<br>Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a> | <b>Europe</b> | Tel: +49 (0) 89 8090 95 21<br>Fax: +49 (0) 89 8090 95 50<br>Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a> |
|----------------------------------|---|------------------|---|---------------|---|

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)  
'M419518:230616'

Printed on 10 Jul 2024