

# Datasheet: MCA2691SBUV540

**BATCH NUMBER 64693431**

|                      |                                               |
|----------------------|-----------------------------------------------|
| <b>Description:</b>  | RAT ANTI MOUSE CD4:StarBright UltraViolet 540 |
| <b>Specificity:</b>  | CD4                                           |
| <b>Other names:</b>  | L3T4 ANTIGEN, LY-4                            |
| <b>Format:</b>       | StarBright UltraViolet 540                    |
| <b>Product Type:</b> | Monoclonal Antibody                           |
| <b>Clone:</b>        | RM4-5                                         |
| <b>Isotype:</b>      | IgG2a                                         |
| <b>Quantity:</b>     | 100 TESTS/0.5ml                               |

## 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>  | Mouse                                                                                         |                            |                          |
| <b>Product Form</b>    | Purified IgG conjugated to StarBright UltraViolet 540 - liquid                                |                            |                          |
| <b>Max Ex/Em</b>       | <b>Fluorophore</b>                                                                            | <b>Excitation Max (nm)</b> | <b>Emission Max (nm)</b> |
|                        | StarBright UltraViolet 540                                                                    | 338                        | 540                      |
| <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                                                                       |                            |                          |
|                        | 0.1% Pluronic F68                                                                             |                            |                          |

0.1% PEG 3350  
0.05% Tween 20

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Approx. Protein Concentrations | For information on the concentration of our StarBright Dye conjugated reagents please visit our <a href="#">FAQ</a> page.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Immunogen                      | BALB/c mouse thymocytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| External Database Links        | <b>UniProt:</b><br><a href="#">P06332</a> <a href="#">Related reagents</a><br><br><b>Entrez Gene:</b><br><a href="#">12504</a> Cd4 <a href="#">Related reagents</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Specificity                    | <p><b>Rat anti Mouse CD4 antibody, clone RM4-5</b> detects mouse CD4, a 55 kDa protein also known as Ly-4 and L3T4. CD4 is a single chain transmembraneous glycoprotein which belongs to the immunoglobulin superfamily, and is primarily expressed on peripheral blood monocytes and tissue macrophages. CD4 is also expressed on a subpopulation of regulatory T cells (CD4<sup>+</sup>CD25<sup>+</sup>), which play a key role in the maintenance of self tolerance.</p> <p>Rat anti Mouse CD4 antibody, clone RM4-5 can be used for <i>in vitro</i> blocking of ligand binding, as well as <i>in vitro</i> CD4<sup>+</sup> T cell depletions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Flow Cytometry                 | Use 5µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| References                     | <ol style="list-style-type: none"><li>1. von Kutzleben, S. <i>et al.</i> (2017) Depletion of CD52-positive cells inhibits the development of central nervous system autoimmune disease, but deletes an immune-tolerance promoting CD8 T-cell population. Implications for secondary autoimmunity of alemtuzumab in multiple sclerosis. <a href="#">Immunology. 150 (4): 444-55.</a></li><li>2. Zamudio, F. <i>et al.</i> (2020) TDP-43 mediated blood-brain barrier permeability and leukocyte infiltration promote neurodegeneration in a low-grade systemic inflammation mouse model. <a href="#">J Neuroinflammation. 17 (1): 283.</a></li><li>3. Aloui, A. <i>et al.</i> (2023) AFM(1) Exposure in Male Balb/c Mice and Intervention Strategies Against Its Immuno-physiological toxicity using Clay Mineral and Lactic Acid Bacteria Alone or in Combination. <a href="#">Immunopharmacol Immunotoxicol. : 1-32.</a></li><li>4. Camponeschi, C. <i>et al.</i> (2021) S100B Protein as a Therapeutic Target in Multiple Sclerosis: The S100B Inhibitor Arundic Acid Protects from Chronic Experimental Autoimmune Encephalomyelitis. <a href="#">Int J Mol Sci. 22 (24): 13558.</a></li></ol> |
| Further Reading                | <ol style="list-style-type: none"><li>1. Fehérvári, Z. &amp; Sakaguchi, S. (2004) CD4<sup>+</sup> Tregs and immune control. <a href="#">J Clin Invest. 114 (9): 1209-17.</a></li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Storage                        | Store at +4°C. DO NOT FREEZE.<br>This product should be stored undiluted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                      |                                                                                                                                                                                           |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Guarantee</b>                     | 12 months from date of despatch                                                                                                                                                           |
| <b>Acknowledgements</b>              | This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts                                                                                           |
| <b>Health And Safety Information</b> | Material Safety Datasheet documentation #20471 available at:<br><a href="https://www.bio-rad-antibodies.com/SDS/MCA2691SBUV540">https://www.bio-rad-antibodies.com/SDS/MCA2691SBUV540</a> |
| <b>Regulatory</b>                    | For research purposes only                                                                                                                                                                |

## Related Products

### Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://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](http://bio-rad-antibodies.com/datasheets)

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