

## Datasheet: MCA2127SBV670

|                      |   |
|----------------------|---|
| <b>Description:</b>  | MOUSE ANTI HUMAN CD25:StarBright Violet 670 |
| <b>Specificity:</b>  | CD25  |
| <b>Other names:</b>  | IL-2R ALPHA CHAIN                           |
| <b>Format:</b>       | StarBright Violet 670                       |
| <b>Product Type:</b> | Monoclonal Antibody                         |
| <b>Clone:</b>        | MEM-181                                     |
| <b>Isotype:</b>      | IgG1  |
| <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>  | Human   |                            |                          |
| <b>Product Form</b>    | Purified IgG conjugated to StarBright Violet 670 - liquid     |                            |                          |
| <b>Max Ex/Em</b>       | <b>Fluorophore</b>  | <b>Excitation Max (nm)</b> | <b>Emission Max (nm)</b> |
|                        | StarBright Violet 670   | 400                        | 667                      |
| <b>Preparation</b>     | Purified IgG prepared by affinity chromatography on Protein A |                            |                          |
| <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  |                            |                          |

**Immunogen** Human PHA blasts; day 3 of culture.

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**External Database Links**

**UniProt:**

[P01589](#)   [Related reagents](#)

**Entrez Gene:**

[3559](#) IL2RA   [Related reagents](#)

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**Fusion Partners**

Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3.X63 Ag8.653 myeloma cell line.

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**Specificity**

**Mouse anti Human CD25, clone MEM-181** recognizes the ~55 kDa alpha subunit of the human IL-2 receptor, also known as p55 or TAC antigen, CD25 is a type 1 transmembrane protein with [two Sushi domains](#), also known as short consensus repeats (SCRs) or complement control protein (CCP) modules ([Norman et al. 1991](#)) located within its extracellular domain.

The IL-2 receptor exists in three forms. A high affinity form consisting of a non-covalently linked heterodimer composed of the alpha subunit (CD25) and the IL-2 receptor beta subunit also known as CD122 or p75, a medium affinity beta subunit (CD122) monomer or a low affinity alpha (CD25) subunit monomer.

CD25 is expressed by activated T lymphocytes and activated B lymphocytes responding to antigen or mitogen stimulation. CD25 is also expressed in some thymocytes and oligodendrocytes. In disease, elevated expression of CD25 is noted in a number of chronic inflammatory conditions, tuberculoid leprosy patients demonstrate markedly elevated levels of circulating CD25<sup>high</sup> FoxP3<sup>+</sup> regulatory T cells (T-regs) ([Attia et al. 2010](#)).

Elevated levels of CD25 antigen expression are often seen in cases of [non-Hodgkin's lymphoma](#) and diffuse large B cell lymphoma ([Fujiwara et al. 2013](#)).

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**Flow Cytometry**

Use 5ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.

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**References**

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3. Cutler, A.J. *et al.* (2010) Umbilical cord-derived mesenchymal stromal cells modulate monocyte function to suppress T cell proliferation. [J Immunol. 185: 6617-23.](#)
4. Lawson, J.M. *et al.* (2008) Increased resistance to CD4<sup>+</sup>CD25<sup>hi</sup> regulatory T cell-mediated suppression in patients with type 1 diabetes. [Clin Exp Immunol. 154: 353-9.](#)
5. Holderness, J. *et al.* (2007) Select plant tannins induce IL-2R $\alpha$  up-regulation and augment cell division in gammadelta T cells. [J Immunol. 179: 6468-78.](#)
6. Zhang, Y. *et al.* (2013) Accelerated *in vivo* proliferation of memory phenotype CD4<sup>+</sup>

T-cells in human HIV-1 infection irrespective of viral chemokine co-receptor tropism. [PLoS Pathog. 9 \(4\): e1003310.](#)

7. Nocentini, G. *et al.* (2014) Expansion of regulatory GITR + CD25 Low/- CD4 + T cells in systemic lupus erythematosus patients. [Arthritis Res Ther. 16: 444.](#)

8. Soukup, K. *et al.* (2015) The MAPK-Activated Kinase MK2 Attenuates Dendritic Cell-Mediated Th1 Differentiation and Autoimmune Encephalomyelitis. [J Immunol. 195 \(2\): 541-52.](#)

9. Kusunoki, Y. *et al.* (2010) T-cell immunosenescence and inflammatory response in atomic bomb survivors. [Radiat Res. 174 \(6\): 870-6.](#)

10. Bughani, U. *et al.* (2017) T cell activation and differentiation is modulated by a CD6 domain 1 antibody Itolizumab. [PLoS One. 12 \(7\): e0180088.](#)

11. Knutson, K.L. *et al.* (2015) Regulatory T cells, inherited variation, and clinical outcome in epithelial ovarian cancer. [Cancer Immunol Immunother. 64 \(12\): 1495-504.](#)

12. Boland, J.W. *et al.* (2014) A preliminary evaluation of the effects of opioids on innate and adaptive human *in vitro* immune function. [BMJ Support Palliat Care. 4 \(4\): 357-67.](#)

13. Luger, R. *et al.* (2013) Toll-like receptor 4 engagement drives differentiation of human and murine dendritic cells from a pro- into an anti-inflammatory mode. [PLoS One. 8 \(2\): e54879.](#)

14. Rezalotfi, A. *et al.* (2020) Gastrospheres as a Model of Gastric Cancer Stem Cells Skew Th17/Treg Balance toward Antitumor Th17 Cells. [J Immunol Res. 2020: 6261814.](#)

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| <b>Storage</b>                       | 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>20471: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/20471.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/20471.pdf</a> |
| <b>Regulatory</b>                    | For research purposes only   |

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## Related Products

### 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)

'M379180:210324'

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