

## Datasheet: MCA2127SBV610

**BATCH NUMBER 64647378**

<b>Description:</b>	MOUSE ANTI HUMAN CD25:StarBright Violet 610
<b>Specificity:</b>	CD25
<b>Other names:</b>	IL-2R ALPHA CHAIN
<b>Format:</b>	StarBright Violet 610
<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 610 - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	StarBright Violet 610	403	607
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A 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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**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 CD25high FoxP3+ 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 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.

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- References**
1. Prager, E. *et al.* (2001) Induction of hyporesponsiveness and impaired T lymphocyte activation by the CD31 receptor:ligand pathway in T cells. [J Immunol. 166 \(4\): 2364-71.](#)
  2. Thorborn, G. *et al.* (2010) Increased sensitivity of CD4+ T-effector cells to CD4+CD25+ Treg suppression compensates for reduced Treg number in asymptomatic HIV-1 infection. [PLoS One. 5: e9254.](#)
  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+CD25hi 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-2Ralpha 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+ 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 GTR + 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.](#)
  15. Thymianou, S *et al.* (2019) MBP7285 on Human Tcell Activation [Mobile health Knowledge 21 Jul](#)

<b>Storage</b>	Store at +4°C. DO NOT FREEZE. 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: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2127SBV610">https://www.bio-rad-antibodies.com/SDS/MCA2127SBV610</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Useful Reagents

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

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

**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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