

Datasheet: MCA2127SBR670

BATCH NUMBER 100008015

Description:	MOUSE ANTI HUMAN CD25:StarBright Red 670
Specificity:	CD25
Other names:	IL-2R ALPHA CHAIN
Format:	StarBright Red 670
Product Type:	Monoclonal Antibody
Clone:	MEM-181
Isotype:	IgG1
Quantity:	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.

	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.

Target Species	Human		
Product Form	Purified IgG conjugated to StarBright Red 670 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright Red 670	653	666
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide (NaN ₃)		
Stabilisers	1% Bovine Serum Albumin		
	0.1% Pluronic F68		
	0.1% PEG 3350		

Immunogen	Human PHA blasts; day 3 of culture.
External Database Links	<p>UniProt: P01589 Related reagents</p> <p>Entrez Gene: 3559 IL2RA Related reagents</p>
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3.X63 Ag8.653 myeloma cell line.
Specificity	<p>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.</p> <p>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.</p> <p>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).</p> <p>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).</p>
Flow Cytometry	Use 5µl of the suggested working dilution to label 10 ⁶ cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
References	<ol style="list-style-type: none"> 1. Prager, E. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (2010) Umbilical cord-derived mesenchymal stromal cells modulate monocyte function to suppress T cell proliferation. J Immunol. 185: 6617-23. 4. Lawson, J.M. <i>et al.</i> (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. <i>et al.</i> (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. Rezaiofi, 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 Knoledge 21 Jul](#)

Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA2127SBR670 20471
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)
[HUMAN SEROBLOCK \(BUF070B\)](#)

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
----------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------	------------------	-------------------------------------------------------------------------------------------------------------------------------------------------	---------------	-----------------------------------------------------------------------------------------------------------------------------------------------------

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M419794:230619'

Printed on 13 May 2024

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)