

Datasheet: MCA2127F

Description:	MOUSE ANTI HUMAN CD25:FITC
Specificity:	CD25
Other names:	IL-2R ALPHA CHAIN
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	MEM-181
Isotype:	IgG1
Quantity:	0.1 mg

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 - 1/10

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Human		
Product Form	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525
Preparation	Purified IgG prepared by affinity chromatography on Protein A		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml		

Immunogen Human PHA blasts; day 3 of culture.

External Database

Links

UniProt:

[P01589](#) [Related reagents](#)

Entrez Gene:

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

RRID

AB_323498

Fusion Partners

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

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](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

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.](#)
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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) Gastospheres as a Model of Gastric Cancer Stem Cells Skew Th17/Treg Balance toward Antitumor Th17 Cells. [J Immunol Res. 2020: 6261814.](#)

Storage This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

Recommended Useful Reagents

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

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

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

'M384873:210513'

Printed on 07 Jan 2022
