

Datasheet: MCA2127A647

**BATCH NUMBER 154724**

<b>Description:</b>	MOUSE ANTI HUMAN CD25:Alexa Fluor® 647
<b>Specificity:</b>	CD25
<b>Other names:</b>	IL-2R ALPHA CHAIN
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MEM-181
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	100 TESTS/1ml

## 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 - 1/5

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 Alexa Fluor® 647 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Alexa Fluor®647	650	665
Preparation	Purified IgG prepared by affinity chromatography on Protein A		
Buffer Solution	Phosphate buffered saline		
Preservative Stabilisers	0.09% Sodium Azide		
	1%	Bovine Serum Albumin	
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml		

<b>Immunogen</b>	Human PHA blasts; day 3 of culture.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P01589</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">3559</a>    IL2RA    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_566672
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3.X63 Ag8.653 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD25, clone MEM-181</b> 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 <a href="#">two Sushi domains</a>, also known as short consensus repeats (SCRs) or complement control protein (CCP) modules (<a href="#">Norman et al. 1991</a>) 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) (<a href="#">Attia et al. 2010</a>).</p> <p>Elevated levels of CD25 antigen expression are often seen in cases of <a href="#">non-Hodgkin 's lymphoma</a> and diffuse large B cell lymphoma (<a href="#">Fujiwara et al.2013</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>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. <a href="#">J Immunol. 166 (4): 2364-71.</a></li> <li>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. <a href="#">PLoS One. 5: e9254.</a></li> <li>3. Cutler, A.J. <i>et al.</i> (2010) Umbilical cord-derived mesenchymal stromal cells modulate monocyte function to suppress T cell proliferation. <a href="#">J Immunol. 185: 6617-23.</a></li> <li>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. <a href="#">Clin Exp Immunol. 154: 353-9.</a></li> <li>5. Holderness, J. <i>et al.</i> (2007) Select plant tannins induce IL-2Ralpha up-regulation and augment cell division in gammadelta T cells. <a href="#">J Immunol. 179: 6468-78.</a></li> </ol>

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.](#)

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**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee**

12 months from date of despatch

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**Acknowledgements**

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**Health And Safety Information**

Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2127A647>  
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**Regulatory**

For research purposes only

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## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

### Recommended Useful Reagents

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

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

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