

## Datasheet: MCA6117APC

**BATCH NUMBER 149838**

<b>Description:</b>	MOUSE ANTI HUMAN CD137:APC
<b>Specificity:</b>	CD137
<b>Other names:</b>	TNFRSF9
<b>Format:</b>	APC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	4B4-1
<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

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

#### Species Cross Reactivity

Reacts with: Primate

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

#### Product Form

Purified IgG conjugated to Allophycocyanin (APC) - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	APC	650	661

#### Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative</b>	<0.1% Sodium Azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	0.2% Bovine Serum Albumin
<b>Immunogen</b>	Recombinant human CD137 ectodomain
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q07011</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">3604</a>    TNFRSF9    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CD137, ILA
<b>Specificity</b>	<p><b>Mouse anti Human CD137, clone 4B4-1</b> recognizes <a href="#">CD137</a>. CD137 (also known as 4-1BB ligand receptor or TNFRSF9) is a type I transmembrane glycoprotein of the Tumor Necrosis Factor receptor family that is expressed on activated T and NK cells, dendritic cells, myeloid cells and at the surface of some non-lymphoid cells under specific conditions (<a href="#">Schwarz et al. 1995</a>). CD137 acts as a receptor for 4-1BB ligand, expressed on activated macrophages, activated B cells, hematopoietic stem cells and myeloid progenitor cells (<a href="#">Pollock et al. 1994</a>) and for some proteins of the extracellular matrix (<a href="#">Chalupny et al. 1992</a>).</p> <p>The interaction between CD137 and 4-1BBL acts as a co-stimulatory signal for the activation, expansion and survival of T cells (<a href="#">Wen et al. 2002</a>). CD137 signaling is involved in the generation of CD8+ T cells and enhance their cytotoxic activity (<a href="#">Shuford et al. 1997</a>). Because of its ability to promote the anti-tumorigenic activity of cytotoxic T cells, CD137 is the target of several cancer immune therapies, such as the agonist anti-CD137 Urelumab (<a href="#">Segal et al. 2017</a>) and Utomilumab (<a href="#">Chester et al. 2018</a>). CD137 also binds to the adaptor proteins TRAF1, 2 and 3 to promote NF-kappaB activation (<a href="#">Jang et al. 1998</a>).</p> <p>Mouse anti-human CD137, clone 4B4-1 has been reported to immunoprecipitate a homodimeric protein of 32kDa under reducing conditions and 85kDa under non-reducing conditions (<a href="#">Garni-Wagner et al. 1996</a>).</p>
<b>Purity</b>	>95% by SDS PAGE
<b>Flow Cytometry</b>	Use 10ul of the undiluted reagent to label 1x10 <sup>6</sup> cells in 100ul
<b>Storage</b>	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light.
<b>Guarantee</b>	12 months from date of despatch

**Health And Safety  
Information**

Material Safety Datasheet documentation #10041 available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA6117APC>  
10041

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:APC \(MCA928APC\)](#)

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Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

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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](https://www.bio-rad-antibodies.com/datasheets)  
'M353572:190509'

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