

## Datasheet: MCA6117PE

<b>Description:</b>	MOUSE ANTI HUMAN CD137:RPE
<b>Specificity:</b>	CD137
<b>Other names:</b>	TNFRSF9
<b>Format:</b>	RPE
<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 R. Phycoerythrin (RPE) - liquid

#### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578
RPE 561nm laser	546	578

#### 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>	<p>Store at +4°C. DO NOT FREEZE.</p> <p>This product should be stored undiluted. This product is photosensitive and should be protected from light.</p>
<b>Guarantee</b>	Guaranteed for 12 months from the date of despatch or until the date of expiry, whichever comes first. Please see label for expiry date.

**Health And Safety  
Information**

Material Safety Datasheet documentation #10041 available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA6117PE>  
10041

---

**Regulatory**

For research purposes only

---

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto: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](mailto: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](https://www.bio-rad-antibodies.com/datasheets)

'M401947:220718'

**Printed on 12 Aug 2023**

---

© 2023 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)