

## Datasheet: MCA2653T

<b>Description:</b>	RAT ANTI HUMAN CD137
<b>Specificity:</b>	CD137
<b>Other names:</b>	4-1BB LIGAND RECEPTOR
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	JG1.6A
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	25 µg

## 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	■			
Immunohistology - Frozen			■	
Immunohistology - Paraffin			■	
ELISA	■			
Immunoprecipitation			■	
Western Blotting			■	

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.

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	TRIS buffered saline
<b>Preservative Stabilisers</b>	<0.1% Sodium Azide (NaN <sub>3</sub> )

Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Recombinant human CD137-Fc.
External Database Links	<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>
Synonyms	CD137, ILA
RRID	AB_1100691
Fusion Partners	Lymph node cells from immunised Lou rat were fused with cells of the mouse NS-1 myeloma cell line.
Specificity	<p><b>Rat anti Human CD137 antibody, clone JG1.6A</b> recognizes human CD137, an 83kD type I integral membrane protein, otherwise known as 4-1BB. The CD137 molecule is primarily expressed on activated T-cells. It is a costimulatory member of the tumour necrosis receptor family and regulates T-cell activation and proliferation.</p> <p>Rat anti Human CD137 antibody, clone JG1.6A induces <math>\gamma</math>-interferon activity in isolated T-cells as measured by ELISA (<a href="#">Rajendran et al. 2019</a>).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label $1 \times 10^6$ cells in 100ul.
Further Reading	<ol style="list-style-type: none"> <li>Pollok, K.E. <i>et al.</i> (1993) Inducible T cell antigen 4-1BB. Analysis of expression and function. <a href="#">J Immunol. 150 (3): 771-81.</a></li> <li>Alderson, M.R. <i>et al.</i> (1994) Molecular and biological characterization of human 4-1BB and its ligand. <a href="#">Eur J Immunol. 24 (9): 2219-27.</a></li> <li>Schwarz, H. <i>et al.</i> (1997) CD137, a member of the tumor necrosis factor receptor family, is located on chromosome 1p36, in a cluster of related genes, and colocalizes with several malignancies. <a href="#">Biochem Biophys Res Commun. 235 (3): 699-703.</a></li> <li>Cannons, J.L. <i>et al.</i> (2001) 4-1BB ligand induces cell division, sustains survival, and enhances effector function of CD4 and CD8 T cells with similar efficacy. <a href="#">J Immunol. 167 (3): 1313-24.</a></li> </ol>
Storage	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
Guarantee	12 months from date of despatch

**Health And Safety  
Information**

Material Safety Datasheet documentation #10057 available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA2653T>  
10057

**Regulatory**

For research purposes only

## Related Products

### Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR131...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>
Rabbit Anti Rat IgG (STAR16...)	<a href="#">DyLight®800</a>

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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)  
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