

## Datasheet: MCA47GA

<b>Description:</b>	MOUSE ANTI RAT CD90
<b>Specificity:</b>	CD90
<b>Other names:</b>	THY1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	OX-7
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 mg

## Product Details

**RRID** AB\_566922

**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	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Immunofluorescence	▪			

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** Rat

**Species Cross Reactivity** Reacts with: Rabbit, Mouse, Guinea Pig  
**N.B.** Antibody reactivity and working conditions may vary between species.

**Product Form** Purified IgG - liquid

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

**Buffer Solution** Phosphate buffered saline

**Preservative Stabilisers** 0.09% Sodium Azide

**Carrier Free** Yes

<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Rat Thy1 antigen.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P01830</a>   <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">24832</a>   Thy1   <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Thy-1
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Rat CD90 antibody, clone OX-7</b> recognizes rat and CD90, also known as Thy1.1, a GPI-anchored membrane protein containing a single V type Ig-like domain CD90 is expressed on a variety of cell types including thymocytes, neuronal cells, stem cells, immature B cells and connective tissues, CD90 is also expressed in T cells in mice.</p> <p>Since Thy1.1 is a monomorphic determinant in rat but polymorphic in mice, clone MRC OX-7 reacts with Thy1.1 mice e.g. AKR and FVB, but not Thy1.2 mice such as CBA and BALB/c. The affinity of the Fab' of MRC OX-7 for rat Thy1 is <math>3 \times 10^9 \text{m}^{-1}</math> and for mouse Thy1.1 is <math>3 \times 10^8 \text{m}^{-1}</math>(1).</p> <p>Mouse anti rat CD90, clone MRC OX-7 has been demonstrated to promote neurite outgrowths on peripherin-stained sympathetic rat neurons, using fluorescence microscopy (<a href="#">Jeng et al. 1998</a>). Clone OX-7 has also been reported to induce glomerular nephritis in Wistar rats (<a href="#">Tamura et al. 1996</a>).</p> <p>This product is routinely tested in flow cytometry on rat thymocytes.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label $10^6$ cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>Mason, D.W. &amp; Williams, A.F. (1980) The kinetics of antibody binding to membrane antigens in solution and at the cell surface. <a href="#">Biochem J. 187 (1): 1-20.</a></li> <li>Campbell, D.G. et al. (1981) Rat brain Thy-1 glycoprotein. The amino acid sequence, disulphide bonds and an unusual hydrophobic region. <a href="#">Biochem J. 195 (1): 15-30.</a></li> <li>Bukovský, A. et al. (1983) The localization of Thy-1.1, MRC OX 2 and Ia antigens in the rat ovary and fallopian tube. <a href="#">Immunology. 48 (3): 587-96.</a></li> <li>Lee, W.S. et al. (1998) Thy-1, a novel marker for angiogenesis upregulated by inflammatory cytokines. <a href="#">Circ Res. 82 (8): 845-51.</a></li> <li>Jeng, C.J. et al. (1998) Thy-1 is a component common to multiple populations of synaptic vesicles. <a href="#">J Cell Biol. 140 (3): 685-98.</a></li> <li>Banerjee, S.A. et al. (1997) An antibody to the tetraspan membrane protein CD9 promotes neurite formation in a partially alpha3beta1 integrin-dependent manner. <a href="#">J Neurosci. 17 (8): 2756-65.</a></li> <li>Kawachi, H. et al. (1992) Epitope-specific induction of mesangial lesions with proteinuria by a MoAb against mesangial cell surface antigen. <a href="#">Clin Exp Immunol. 88 (3): 399-404.</a></li> <li>Tamura, M. et al. (1996) Enhanced glomerular profilin gene and protein expression in experimental mesangial proliferative glomerulonephritis. <a href="#">Biochem Biophys Res Commun. 222 (3): 683-7.</a></li> <li>Stevenson, K.S. et al. (2009) Isolation, characterization, and differentiation of thy1.1-sorted</li> </ol>

- pancreatic adult progenitor cell populations. [Stem Cells Dev. 18 \(10\): 1389-98.](#)
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16. Shimizu T *et al.* (2016) Bioactivity of sol-gel-derived TiO<sub>2</sub> coating on polyetheretherketone: *In vitro* and *in vivo* studies. [Acta Biomater. 35: 305-17.](#)
17. Maia, L. *et al.* (2017) A proteomic study of mesenchymal stem cells from equine umbilical cord. [Theriogenology. 100: 8-15.](#)
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<b>Storage</b>	Store at +4°C or at -20°C if preferred.  This product should be stored undiluted.  Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
<b>Guarantee</b>	18 months from date of despatch.
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

- Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
- Goat Anti Mouse IgG (STAR77...) [HRP](#)
- Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
- Rabbit Anti Mouse IgG (STAR8...) [DyLight®800](#)
- Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
- Goat Anti Mouse IgG (STAR76...) [RPE](#)
- Goat Anti Mouse IgG (STAR70...) [FITC](#)
- Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
- Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
- Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®680](#), [DyLight®800](#), [FITC](#), [HRP](#)

### Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA1209)

**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

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

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