

Datasheet: MCA02R

BATCH NUMBER 163797

Description:	MOUSE ANTI MOUSE CD90
Specificity:	CD90
Other names:	THY1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	F7D5
Isotype:	IgM
Quantity:	0.25 mg

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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/10 - 1/25
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Cytotoxic Assays	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Mouse
Product Form	IgM fraction - liquid.
Preparation	IgM fraction prepared by ammonium sulphate precipitation from tissue culture supernatant.
Buffer Solution	Phosphate buffered saline.
Preservative Stabilisers	0.09% sodium azide.

Approx. Protein Concentrations	IgM concentration 1.0 mg/ml.
External Database Links	<p>UniProt: P01831 Related reagents</p> <p>Entrez Gene: 21838 Thy1 Related reagents</p>
Synonyms	Thy-1
RRID	AB_323481
Fusion Partners	Spleen cells from immunized AKR mice were fused with cells of the mouse NS-1 myeloma cell line.
Specificity	<p>Mouse anti Mouse CD90 antibody, clone F7D5 recognizes the mouse Thy1.2 alloantigen, also known as CD90.2, which is expressed by thymocytes and peripheral T lymphocytes. Clone F7D5 reacts with Thy1.2 mice such as CBA and BALB/C, but not with Thy1.1 mice eg. AKR and FUB.</p> <p>The antibody is particularly useful for removal of T lymphocytes from cell populations by complement mediated cytotoxicity (Lake et al. 1979).</p> <p>Mouse anti Mouse CD90 antibody, clone F7D5 is routinely tested in flow cytometry using mouse thymocytes.</p>
References	<ol style="list-style-type: none"> 1. Lake, P. <i>et al.</i> (1979) Production and characterization of cytotoxic Thy-1 antibody-secreting hybrid cell lines. Detection of T cell subsets. Eur J Immunol. 9 (11): 875-86. 2. Hanafusa, T. <i>et al.</i> (1988) Induction of insulinitis by adoptive transfer with L3T4+Lyt2-T-lymphocytes in T-lymphocyte-depleted NOD mice. Diabetes. 37: 204-8. 3. DeVries-vanDerZwan, A. <i>et al.</i> (1997) Specific tolerance induction and transplantation: a single-day protocol. Blood. 89 (7): 2596-601. 4. Ishikawa, N. <i>et al.</i> (1998) Early cytokine responses during intestinal parasitic infections. Immunology. 93 (2): 257-63. 5. Oosterwegel, M.A. <i>et al.</i> (1999) The role of CTLA-4 in regulating Th2 differentiation. J Immunol. 163 (5): 2634-9. 6. Raeber, A.J. <i>et al.</i> (1999) PrP-dependent association of prions with splenic but not circulating lymphocytes of scrapie-infected mice. EMBO J. 18: 2702-6. 7. Wang, X. <i>et al.</i> (2001) Functional soluble CD100/Sema4D released from activated lymphocytes: possible role in normal and pathologic immune responses. Blood. 97 (11): 3498-504. 8. Yoshida, K. <i>et al.</i> (2002) Evidence for shared recognition of a peptide ligand by a diverse panel of non-obese diabetic mice-derived, islet-specific, diabetogenic T cell clones. Int Immunol. 14 (12): 1439-47. 9. Billiau, A.D. <i>et al.</i> (2002) Crucial role of timing of donor lymphocyte infusion in generating dissociated graft-versus-host and graft-versus-leukemia responses in mice

- receiving allogeneic bone marrow transplants. [Blood. 100 \(5\): 1894-902.](#)
10. van Pel, M. *et al.* (2003) Towards a myeloablative regimen with clinical potential: I. Treosulfan conditioning and bone marrow transplantation allow induction of donor-specific tolerance for skin grafts across full MHC barriers. [Bone Marrow Transplant. 32 \(1\): 15-22.](#)
 11. Billiau, A.D. *et al.* (2003) Transient expansion of Mac1+Ly6-G+Ly6-C+ early myeloid cells with suppressor activity in spleens of murine radiation marrow chimeras: possible implications for the graft-versus-host and graft-versus-leukemia reactivity of donor lymphocyte infusions. [Blood. 102: 740-8.](#)
 12. Ishigaki, H. *et al.* (2006) Preparation and functional analysis of tumor-infiltrating stroma cells using bone marrow chimera mice. [Microbiol Immunol. 50 \(8\): 655-62.](#)
 13. Winzeler, A.M. *et al.* (2011) The lipid sulfatide is a novel myelin-associated inhibitor of CNS axon outgrowth. [J Neurosci. 31: 6481-92.](#)
 14. Gobin, V. *et al.* (2013) Fluoxetine reduces murine graft-versus-host disease by induction of T cell immunosuppression. [J Neuroimmune Pharmacol. 8 \(4\): 934-43.](#)
 15. Unterlauff, J.D. *et al.* (2014) Enhanced survival of retinal ganglion cells is mediated by Müller glial cell-derived PEDF. [Exp Eye Res. 127: 206-14.](#)
 16. Vadivelu, S. *et al.* (2015) NG2+ Progenitors Derived From Embryonic Stem Cells Penetrate Glial Scar and Promote Axonal Outgrowth Into White Matter After Spinal Cord Injury. [Stem Cells Transl Med. pii: sctm.2014-0107.](#)
 17. Wang, Y.L. *et al.* (2015) Electrospun and woven silk fibroin/poly(lactic-co-glycolic acid) nerve guidance conduits for repairing peripheral nerve injury. [Neural Regen Res. 10 \(10\): 1635-42.](#)
 18. Bernard-Marissal, N. *et al.* (2015) Dysfunction in endoplasmic reticulum-mitochondria crosstalk underlies SIGMAR1 loss of function mediated motor neuron degeneration. [Brain. 138 \(Pt 4\): 875-90.](#)
 19. Brown, R.L. *et al.* (2015) TRPM3 Expression in Mouse Retina. [PLoS One. 10: e0117615.](#)
 20. Liu, X. *et al.* (2017) Thy-1 interaction with Fas in lipid rafts regulates fibroblast apoptosis and lung injury resolution. [Lab Invest. \(3\): 256-67.](#)
 21. Naaldijk, Y. *et al.* (2017) Effect of systemic transplantation of bone marrow-derived mesenchymal stem cells on neuropathology markers in APP/PS1 Alzheimer mice. [Neuropathol Appl Neurobiol. 43 \(4\): 299-314.](#)
 22. Takahama, S. *et al.* (2017) Retinal Astrocytes and GABAergic Wide-Field Amacrine Cells Express PDGFR α : Connection to Retinal Ganglion Cell Neuroprotection by PDGF-AA. [Invest Ophthalmol Vis Sci. 58 \(11\): 4703-11.](#)
 23. Zhu, B. *et al.* (2019) GAIN domain-mediated cleavage is required for activation of G protein-coupled receptor 56 (GPR56) by its natural ligands and a small-molecule agonist. [J Biol Chem. pii: jbc.RA119.008234. Oct 18 \[Epub ahead of print\].](#)
 24. Bürger, S. *et al.* (2020) Pigment Epithelium-Derived Factor (PEDF) Receptors Are Involved in Survival of Retinal Neurons. [Int J Mol Sci. 22 \(1\): 369.](#)
 25. Qiu, A.W. *et al.* (2021) IL-17A injury to retinal ganglion cells is mediated by retinal Müller cells in diabetic retinopathy. [Cell Death Dis. 12 \(11\): 1057.](#)
 26. Xing, J. *et al.* (2023) Post-injury born oligodendrocytes incorporate into the glial scar and contribute to the inhibition of axon regeneration. [Development. 150 \(8\): dev201311.](#)
 27. Ma, R. *et al.* (2023) RGC-Net: An Automatic Reconstruction and Quantification Algorithm for Retinal Ganglion Cells Based on Deep Learning. [Transl Vis Sci Technol. 12 \(5\): 7.](#)

28. Xing, J. *et al.* (2023) Experimental upregulation of developmentally downregulated ribosomal protein large subunits 7 and 7A promotes axon regeneration after injury *in vivo*. [Exp Neurol. 368: 114510.](#)
29. Llorente, I.L. *et al.* (2021) Patient-derived glial enriched progenitors repair functional deficits due to white matter stroke and vascular dementia in rodents. [Sci Transl Med. 13 \(590\) \[Epub ahead of print\].](#)
30. Lukomska, A. *et al.* (2024) Upregulation of developmentally-downregulated miR-1247-5p promotes neuroprotection and axon regeneration *in vivo*. [Neurosci Lett. 823: 137662.](#)

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	<p>Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA02R10040</p>
Regulatory	For research purposes only.

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgM (STAR138...) [Alk. Phos.](#)
 Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: 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	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: 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
 'M406848:221002'

Printed on 02 Feb 2024