

Datasheet: MCA02R

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	IgM concentration 1.0 mg/ml.

Concentrations

External	Database
Links	

UniProt:

P01831 Related reagents

Entrez Gene:

21838 Thy1 Related reagents

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

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.

The antibody is particularly useful for removal of T lymphocytes from cell populations by complement mediated cytotoxicity (<u>Lake et al.</u> 1979).

Mouse anti Mouse CD90 antibody, clone F7D5 is routinely tested in flow cytometry using mouse thymocytes.

References

- 1. Lake, P. *et al.* (1979) Production and characterization of cytotoxic Thy-1 antibody-secreting hybrid cell lines. Detection of T cell subsets. <u>Eur J Immunol. 9 (11): 875-86.</u>
- 2. Hanafusa, T. *et al.* (1988) Induction of insulitis by adoptive transfer with L3T4+Lyt2-T-lymphocytes in T-lymphocyte-depleted NOD mice. <u>Diabetes. 37: 204-8.</u>
- 3. DeVries-vanDerZwan, A. *et al.* (1997) Specific tolerance induction and transplantation: a single-day protocol. <u>Blood. 89 (7): 2596-601.</u>
- 4. Ishikawa, N. *et al.* (1998) Early cytokine responses during intestinal parasitic infections. Immunology. 93 (2): 257-63.
- 5. Oosterwegel, M.A. *et al.* (1999) The role of CTLA-4 in regulating Th2 differentiation. <u>J</u> Immunol. 163 (5): 2634-9.
- 6. Raeber, A.J. *et al.* (1999) PrP-dependent association of prions with splenic but not circulating lymphocytes of scrapie-infected mice. <u>EMBO J. 18: 2702-6.</u>
- 7. Wang, X. *et al.* (2001) Functional soluble CD100/Sema4D released from activated lymphocytes: possible role in normal and pathologic immune responses. <u>Blood. 97 (11):</u> 3498-504.
- 8. Yoshida, K. *et al.* (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. *et al.* (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. <u>Blood. 102: 740-8.</u>
- 12. Ishigaki, H. *et al.* (2006) Preparation and functional analysis of tumor-infiltrating stroma cells using bone marrow chimera mice. <u>Microbiol Immunol.</u> 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. <u>J Neuroimmune Pharmacol. 8 (4): 934-43.</u>
- 15. Unterlauft, J.D. *et al.* (2014) Enhanced survival of retinal ganglion cells is mediated by Müller glial cell-derived PEDF. <u>Exp Eye Res. 127: 206-14.</u>
- 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. <u>Stem Cells Transl Med. pii: sctm.2014-0107.</u>
- 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. <u>Neural Regen Res. 10 (10):</u> 1635-42.
- 18. Bernard-Marissal, N. *et al.* (2015) Dysfunction in endoplasmic reticulum-mitochondria crosstalk underlies SIGMAR1 loss of function mediated motor neuron degeneration. <u>Brain.</u> 138 (Pt 4): 875-90.
- 19. Brown, R.L. *et al.* (2015) TRPM3 Expression in Mouse Retina. <u>PLoS One. 10:</u> <u>e0117615.</u>
- 20. Liu, X. *et al.* (2017) Thy-1 interaction with Fas in lipid rafts regulates fibroblast apoptosis and lung injury resolution. <u>Lab Invest.</u> (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 PDGFRα: Connection to Retinal Ganglion Cell Neuroprotection by PDGF-AA. <u>Invest Ophthalmol Vis Sci. 58 (11): 4703-11.</u>
- 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. <u>J Biol Chem. pii: jbc.RA119.008234. Oct 18 [Epub ahead of print].</u>
- 24. Bürger, S. *et al.* (2020) Pigment Epithelium-Derived Factor (PEDF) Receptors Are Involved in Survival of Retinal Neurons. <u>Int J Mol Sci. 22 (1): 369.</u>
- 25. Qiu, A.W. *et al.* (2021) IL-17A injury to retinal ganglion cells is mediated by retinal Müller cells in diabetic retinopathy. <u>Cell Death Dis. 12 (11): 1057.</u>
- 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. <u>Transl Vis Sci Technol. 12</u> (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. <u>Sci Transl Med. 13</u> (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.
- 31. Sun, S. *et al.* (2020) Opa1 Deficiency Leads to Diminished Mitochondrial Bioenergetics With Compensatory Increased Mitochondrial Motility. <u>Invest Ophthalmol Vis Sci. 61 (6): 42.</u>
- 32. Zwanzig, A. *et al.* (2021) Neuroprotective effects of glial mediators in interactions between retinal neurons and Müller cells. <u>Exp Eye Res. 209: 108689.</u>
- 33. Qiu, A.W. *et al.* (2021) IL-17A injury to retinal ganglion cells is mediated by retinal Müller cells in diabetic retinopathy. <u>Cell Death Dis. 12 (11): 1057.</u>
- 34. Lukomska, A. *et al.* (2024) Augmenting fibronectin levels in injured adult CNS promotes axon regeneration *in vivo*. <u>Exp Neurol. 379: 114877.</u>
- 35. Qiu, A.W. *et al.* (2025) Retinal Müller Cell-Released Exosomal MiR-92a-3p Delivers Interleukin-17A Signal by Targeting Notch-1 to Promote Diabetic Retinopathy. <u>Invest Ophthalmol Vis Sci. 66 (1): 1.</u>

Storage

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.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee	12 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA02R 10040
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

Email: antibody_sales_us@bio-rad.com

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739

Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_uk@bio-rad.com

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'

© 2025 Bio-Rad Laboratories Inc | Legal | Imprint