

Datasheet: MCA90PE BATCH NUMBER 166640

Description:	MOUSE ANTI HUMAN CD90:RPE
Specificity:	CD90
Other names:	THY1
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	F15-42-1
Isotype:	lgG1
Quantity:	100 TESTS

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	•			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.

Species Cross	
Reactivity	

Target Species

Reacts with: Cynomolgus monkey

Human

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) - lyophilized

Reconstitution

Reconstitute in 1 ml distilled water. Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently vortexed after reconstitution and microcentrifuged before use.

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578

Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide
Stabilisers	1% Bovine Serum Albumin
	5% Sucrose
Immunogen	Purified human brain Thy-1.
External Database	UniProt:
LINKS	P04216 Related reagents
	Entrez Gene:
	7070 THY1 Related reagents
RRID	AB_321888
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.
Specificity	Mouse anti Human CD90 antibody, clone F15-42-1 recognizes the human CD90 cell surface antigen, a ~25 kDa glycoprotein homologous to rat Thy1. The antigen is expressed by a subset of CD34+ve cells in the bone marrow and by prothymocytes within the thymus. CD90 is also expressed extensively within the brain.
	Mouse anti Human CD90 antibody, clone F15-42-1 is routinely tested in flow cytometry on the MOLT4 cell line.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	 Daar, A.S. & Fabre, J.W. (1981) Demonstration with monoclonal antibodies of an unusual mononuclear cell infiltrate and loss of normal epithelial membrane antigens in human breast carcinomas. <u>Lancet. 2 (8244): 434-8.</u> Fiegel, H.C. <i>et al.</i> (2004) Stem-like cells in human hepatoblastoma. <u>J Histochem</u>
	Cytochem. 52 (11): 1495-501.
	3. Hagood, J.S. <i>et al.</i> (2005) Loss of fibroblast Thy-1 expression correlates with lung
	fibrogenesis. Am J Pathol. 167 (2): 365-79.
	4. Tome, M. et al. (2007) Calponin is expressed by subpopulations of connective tissue
	cells but not olfactory ensheathing cells in the neonatal olfactory mucosa. <u>BMC Neurosci.</u>
	8: 74. 5. Diaz-Romero, J. <i>et al.</i> (2008) Immunophenotypic changes of human articular
	chondrocytes during monolayer culture reflect bona fide dedifferentiation rather than
	amplification of progenitor cells. <u>J Cell Physiol. 214: 75-83.</u>
	6. Pessina, A. et al. (2010) CD45+/CD133+ positive cells expanded from umbilical cord
	bland companies DDV 4 and mankers of pluminators of Oall Bigliot 04, 700,00

blood expressing PDX-1 and markers of pluripotency. Cell Biol Int. 34: 783-90.

- 7. Manochantr, S. *et al.* (2010) Isolation, characterization and neural differentiation potential of amnion derived mesenchymal stem cells. <u>J Med Assoc Thai. 93 Suppl 7:</u> S183-91.
- 8. Karlsen, T.A. *et al.* (2010) Human primary articular chondrocytes, chondroblasts-like cells, and dedifferentiated chondrocytes: differences in gene, microRNA, and protein expression and phenotype. <u>Tissue Eng Part C Methods</u>. 17: 219-27.
- 9. Hauser, P.V. *et al.* (2010) Stem cells derived from human amniotic fluid contribute to acute kidney injury recovery. <u>Am J Pathol. 177: 2011-21.</u>
- 10. Yin, S. *et al.* (2010) Chondrogenic transdifferentiation of human dermal fibroblasts stimulated with cartilage-derived morphogenetic protein 1. <u>Tissue Eng Part A. 16:</u> 1633-43.
- 11. Gieseke, F. *et al.* (2010) Human multipotent mesenchymal stromal cells use galectin-1 to inhibit immune effector cells. Blood. 116: 3770-9.
- 12. Holzwarth, C. *et al.* (2010) Low physiologic oxygen tensions reduce proliferation and differentiation of human multipotent mesenchymal stromal cells. <u>BMC Cell Biol. 11:11</u>
- 13. Meng, J. *et al* (2011) Contribution of human muscle-derived cells to skeletal muscle regeneration in dystrophic host mice. PLoS One. 6: e17454.
- 14. Cizeau, J. *et al.* (2011) Fusogenics: a recombinant immunotoxin-based screening platform to select internalizing tumor-specific antibody fragments. <u>J Biomol Screen. 16:</u> 90-100.
- 15. Cox, G. *et al.* (2011) The use of the reamer-irrigator-aspirator to harvest mesenchymal stem cells. <u>J Bone Joint Surg Br. 93: 517-24.</u>
- 16. Shafaei, H. *et al.* (2011) Effects of human placental serum on proliferation and morphology of human adipose tissue-derived stem cells. <u>Bone Marrow Transplant. 46:</u> 1464-71.
- 17. Paul, G. et al. (2012) The adult human brain harbors multipotent perivascular mesenchymal stem cells. PLoS One. 7: e35577.
- 18. Supokawej, A. *et al.* (2013) Cardiogenic and myogenic gene expression in mesenchymal stem cells after 5-azacytidine treatment. <u>Turk J Haematol. 30 (2): 115-21.</u>
- 19. Escobar, C.H. & Chaparro, O. (2016) Xeno-Free Extraction, Culture, and Cryopreservation of Human Adipose-Derived Mesenchymal Stem Cells. <u>Stem Cells Transl Med. 5 (3): 358-65.</u>
- 20. Shinoda, K. *et al.* (2016) Thy1+IL-7+ lymphatic endothelial cells in iBALT provide a survival niche for memory T-helper cells in allergic airway inflammation. <u>Proc Natl Acad Sci U S A. 113 (20): E2842-51.</u>
- 21. Kamprom, W. *et al.* (2016) Endothelial Progenitor Cell Migration-Enhancing Factors in the Secretome of Placental-Derived Mesenchymal Stem Cells. <u>Stem Cells Int. 2016:</u> 2514326.
- 22. Vaquero, J. *et al.* (2016) An approach to personalized cell therapy in chronic complete paraplegia: The Puerta de Hierro phase I/II clinical trial. <u>Cytotherapy. 18 (8): 1025-36.</u>
- 23. Zhang, X. *et al.* (2017) Regeneration of hyaline-like cartilage in situ with SOX9 stimulation of bone marrow-derived mesenchymal stem cells. <u>PLoS One. 12 (6):</u> e0180138.
- 24. Garikipati, V. N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. PLoS One. 13 (2): e0192244.
- 25. Chaturvedi, C.P. *et al.* (2018) Altered Expression of Hematopoiesis Regulatory Molecules in Lipopolysaccharide-Induced Bone Marrow Mesenchymal Stem Cells of

Patients with Aplastic Anemia. Stem Cells Int. 2018: 6901761.

- 26. Noda, S. *et al.* (2019) Effect of cell culture density on dental pulp-derived mesenchymal stem cells with reference to osteogenic differentiation. Sci Rep. 9 (1): 5430.
- 27. Song, H. *et al.* (2019) MIF/CD74 axis participates in inflammatory activation of Schwann cells following sciatic nerve injury. <u>J Mol Histol</u>. 50 (4): 355-67.
- 28. Paiboon, N. *et al.* (2019) Gestational Tissue-Derived Human Mesenchymal Stem Cells Use Distinct Combinations of Bioactive Molecules to Suppress the Proliferation of Human Hepatoblastoma and Colorectal Cancer Cells. Stem Cells Int. 2019: 9748795.
- 29. Sanjurjo-Rodriguez, C. *et al.* (2020) Gene Expression Signatures of Synovial Fluid Multipotent Stromal Cells in Advanced Knee Osteoarthritis and Following Knee Joint Distraction. <u>Front Bioeng Biotechnol. 8: 579751.</u>
- 30. Fujii-Tezuka, R. *et al.* (2021) Umbilical artery tissue contains p75 neurotrophin receptor-positive pericyte-like cells that possess neurosphere formation capacity and neurogenic differentiation potential. Regen Ther. 16: 1-11.
- 31. Orikasa, S. *et al.* (2022) Hypoxia-inducible factor 1α induces osteo/odontoblast differentiation of human dental pulp stem cells via Wnt/ β -catenin transcriptional cofactor BCL9. Sci Rep. 12 (1): 682.
- 32. Sirithammajak, S. *et al.* (2022) Human Mesenchymal Stem Cells Derived from the Placenta and Chorion Suppress the Proliferation while Enhancing the Migration of Human Breast Cancer Cells. Stem Cells Int. 2022: 4020845.
- 33. Arenal, Á. *et al.* (2022) Effects of Cardiac Stem Cell on Postinfarction Arrhythmogenic Substrate. Int J Mol Sci. 23 (24): 16211.
- 34. Kruchen, A. *et al.* (2023) Epigenetic Modification of Mesenchymal Stromal Cells Derived from Bone Marrow and Embryonal Tumors to Facilitate Immunotherapeutic Approaches in Pediatric Malignancies. Curr Issues Mol Biol. 45 (3): 2121-35.
- 35. Payet, M. *et al.* (2023) Inflammatory Mesenchymal Stem Cells Express Abundant Membrane-Bound and Soluble Forms of C-Type Lectin-like CD248. <u>Int J Mol Sci. 24 (11):</u> 9546.
- 36. Tiraihi, T. *et al.* (2023) A Sequential Culturing System for Generating Epithelial-Like Stem Cells from Human Mesenchymal Stem Cells Derived from Adipose Tissue Cell Tissue Biol. 17 (6): 639-52.
- 37. Tripathy, N.K. *et al.* (2018) Cardiomyogenic Heterogeneity of Clonal Subpopulations of Human Bone Marrow Mesenchymal Stem Cells. <u>J Stem Cells Regen Med. 14 (1): 27-33.</u>

Storage

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.

This product should be stored undiluted.

DO NOT FREEZE. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA90PE 20487
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA928PE)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M422462:230907'

Printed on 29 Apr 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint