

Datasheet: MCA90F

Description:	MOUSE ANTI HUMAN CD90:FITC
Specificity:	CD90
Other names:	THY1
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	F15-42-1
Isotype:	lgG1
Quantity:	0.1 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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	•			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. The suggested working dilution is 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	Human			
Species Cross	Reacts with: Cynom	olgus monkey		
Reactivity	reactivity is derived	vity and working conditi from testing within our la ations from the originato	aboratories, peer-rev	viewed publications or
Product Form	Purified IgG conjuga	ated to Fluorescein Isoth	niocyanate Isomer 1	(FITC) - liquid
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)	
	FITC	490	525	_
Preparation	Purified IgG prepare	ed by affinity chromatogo	raphy on Protein G	
Buffer Solution	Phosphate buffered	saline		

Preservative	0.09% Sodium Azide
Stabilisers	1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Purified human brain Thy-1.
External Database	
Links	UniProt:  P04216 Related reagents
	Entrez Gene:
	7070 THY1 Related reagents
RRID	AB_321887
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.
Specificity	<b>Mouse anti Human CD90 antibody, clone F15-42-1</b> 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 <sup>6</sup> cells in 100ul.
References	<ol> <li>McKenzie, J.L. &amp; Fabre, J.W. (1981) Human thy-1: unusual localization and possible functional significance in lymphoid tissues. <u>J Immunol. 126 (3): 843-50.</u></li> <li>Daar, A.S. &amp; 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. Lancet. 2 (8244): 434-8.</li> </ol>
	3. Paul, G. et al. (2012) The adult human brain harbors multipotent perivascular
	mesenchymal stem cells. PLoS One. 7: e35577.
	4. Fiegel, H.C. <i>et al.</i> (2004) Stem-like cells in human hepatoblastoma. <u>J Histochem</u> Cytochem. 52 (11): 1495-501.
	5. 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.
	6. 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>

platform to select internalizing tumor-specific antibody fragments. <u>J Biomol Screen. 16:</u>

7. Cox, G. et al. (2011) The use of the reamer-irrigator-aspirator to harvest mesenchymal

8. Cizeau, J. et al. (2011) Fusogenics: a recombinant immunotoxin-based screening

stem cells. J Bone Joint Surg Br. 93: 517-24.

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- 9. Gieseke, F. *et al.* (2010) Human multipotent mesenchymal stromal cells use galectin-1 to inhibit immune effector cells. <u>Blood. 116: 3770-9</u>.
- 10. Hauser, P.V. *et al.* (2010) Stem cells derived from human amniotic fluid contribute to acute kidney injury recovery. Am J Pathol. 177: 2011-21.
- 11. Holzwarth, C. *et al.* (2010) Low physiologic oxygen tensions reduce proliferation and differentiation of human multipotent mesenchymal stromal cells. BMC Cell Biol. 11:11
- 12. 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. Tissue Eng Part C Methods. 17: 219-27.
- 13. 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.
- 14. Meng, J. *et al* (2011) Contribution of human muscle-derived cells to skeletal muscle regeneration in dystrophic host mice. <u>PLoS One. 6: e17454.</u>
- 15. Pessina, A. *et al.* (2010) CD45+/CD133+ positive cells expanded from umbilical cord blood expressing PDX-1 and markers of pluripotency. Cell Biol Int. 34: 783-90.
- 16. 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.
- 17. 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.
- 18. 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.
- 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.</u> 5 (3): 358-65.
- 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. May 2. pii: 201512600. [Epub ahead of print]</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> <u>2514326.</u>
- 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</u>. 18 (8): 1025-36.
- 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. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. <u>PLoS One</u>. 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. <u>Stem Cells Int. 2018: 6901761.</u>
- 26. Noda, S. *et al.* (2019) Effect of cell culture density on dental pulp-derived mesenchymal stem cells with reference to osteogenic differentiation. <u>Sci Rep. 9 (1): 5430.</u>

27. Sanjurjo-Rodriguez, C. *et al.* (2020) Gene Expression Signatures of Synovial Fluid Multipotent Stromal Cells in Advanced Knee Osteoarthritis and Following Knee Joint Distraction. Front Bioeng Biotechnol. 8: 579751.

28. 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>

29. 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. <u>Stem Cells Int. 2019: 9748795.</u>
30. Song, H. *et al.* (2019) MIF/CD74 axis participates in inflammatory activation of

Schwann cells following sciatic nerve injury. J Mol Histol. 50 (4): 355-67.

#### **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. This product is photosensitive and should be protected from light.

Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</a>
Regulatory	For research purposes only

# Related Products

### **Recommended Negative Controls**

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

Email: antibody\_sales\_us@bio-rad.com

### **Recommended Useful Reagents**

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

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

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