

Datasheet: MCA1557PE

BATCH NUMBER 162955

Description:	MOUSE ANTI HUMAN CD105:RPE
Specificity:	CD105
Other names:	ENDOGLIN
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	SN6
Isotype:	IgG1
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.

Target Species

Human

Species Cross Reactivity

Reacts with: Horse, Cynomolgus monkey, Rhesus Monkey
Based on sequence similarity, is expected to react with: Primate
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 with 1ml distilled water

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 (NaN ₃)
Stabilisers	1% bovine serum albumin 5% sucrose
Immunogen	Partially purified cell membrane antigens from fresh leukemia cells
External Database Links	<p>UniProt: P17813 Related reagents</p> <p>Entrez Gene: 2022 ENG Related reagents</p>
Synonyms	END
RRID	AB_321990
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3/NS1 /1-Ag4-1 myeloma cell line
Specificity	Mouse anti Human CD105 antibody, clone SN6 recognizes human endoglin, also known as CD105. CD105 is a glycoprotein homodimer of ~95 kDa subunits expressed by endothelial cells, activated monocytes and some leukemia cells.
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl
References	<ol style="list-style-type: none"> 1. Haruta, Y. & Seon, B.K. (1986) Distinct human leukemia-associated cell surface glycoprotein GP160 defined by monoclonal antibody SN6. Proc Natl Acad Sci USA 83 (20): 7898-902. 2. Pierelli, L. <i>et al.</i> (2000) Modulation of bcl-2 and p27 in human primitive proliferating hematopoietic progenitors by autocrine TGF-beta1 is a cell cycle-independent effect and influences their hematopoietic potential. Blood 95: 3001-9. 3. Nagano, M. <i>et al.</i> (2007) Identification of functional endothelial progenitor cells suitable for the treatment of ischemic tissue using human umbilical cord blood. Blood 110 (1): 151-60. 4. Lozoska-Ochser, B. <i>et al.</i> (2008) Expression of CD86 on human islet endothelial cells facilitates T cell adhesion and migration. J Immunol. 181: 6109-16. 5. Benetti, A. <i>et al.</i> (2008) Transforming growth factor-beta1 and CD105 promote the migration of hepatocellular carcinoma-derived endothelium. Cancer Res. 68: 8626-34. 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. J Cell Physiol. 214: 75-83. 7. Sallustio, F. <i>et al.</i> (2010) TLR2 plays a role in the activation of human resident renal

- stem/progenitor cells. [FASEB J. 24: 514-25.](#)
8. Arufe, M.C. *et al.* (2010) Chondrogenic potential of subpopulations of cells expressing mesenchymal stem cell markers derived from human synovial membranes. [J Cell Biochem. 111: 834-45.](#)
9. Agha-Hosseini, F. *et al.* (2010) *In vitro* isolation of stem cells derived from human dental pulp. [Clin Transplant. 24: E23-8.](#)
10. Ferro, F. *et al.* (2010) Biochemical and biophysical analyses of tissue-engineered bone obtained from three-dimensional culture of a subset of bone marrow mesenchymal stem cells. [Tissue Eng Part A 16: 3657-67.](#)
11. Jin, H.J. *et al.* (2010) GD2 expression is closely associated with neuronal differentiation of human umbilical cord blood-derived mesenchymal stem cells. [Cell Mol Life Sci. 67 \(11\): 1845-58.](#)
12. 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.](#)
13. Braun, J. *et al.* (2010) Evaluation of the osteogenic and chondrogenic differentiation capacities of equine adipose tissue-derived mesenchymal stem cells. [Am J Vet Res. 71 \(10\): 1228-36.](#)
14. Balmayor, E.R. *et al.* (2011) Synthesis and functionalization of superparamagnetic poly- ϵ -caprolactone microparticles for the selective isolation of subpopulations of human adipose-derived stem cells. [J R Soc Interface 8: 896-908.](#)
15. Ciccocioppo, R. *et al.* (2011) Autologous bone marrow-derived mesenchymal stromal cells in the treatment of fistulising Crohn's disease. [Gut 60: 788-98.](#)
16. Cox, G. *et al.* (2011) The use of the reamer-irrigator-aspirator to harvest mesenchymal stem cells. [J Bone Joint Surg Br. 93: 517-24.](#)
17. De Schauwer, C. *et al.* (2012) In search for cross-reactivity to immunophenotype equine mesenchymal stromal cells by multicolor flow cytometry. [Cytometry A 81: 312-23.](#)
18. Tso, C. *et al.* (2012) Phenotypic and functional changes in blood monocytes following adherence to endothelium. [PLoS One 7: e37091.](#)
19. Supokawej, A. *et al.* (2013) Cardiogenic and myogenic gene expression in mesenchymal stem cells after 5-azacytidine treatment. [Turk J Haematol. 30 \(2\): 115-21.](#)
20. Mehrkens, A. *et al.* (2013) Non-adherent mesenchymal progenitors from adipose tissue stromal vascular fraction. [Tissue Eng Part A 20: 1081-8.](#)
21. Kang, S.D. *et al.* (2013) Isolation of Functional Human Endothelial Cells from Small Volumes of Umbilical Cord Blood. [Ann Biomed Eng. 41: 2181-92.](#)
22. Cho, H.J. *et al.* (2013) Generation of human secondary cardiospheres as a potent cell processing strategy for cell-based cardiac repair. [Biomaterials 34: 651-61.](#)
23. Hu, N. *et al.* (2013) Long-term outcome of the repair of 50 mm long median nerve defects in rhesus monkeys with marrow mesenchymal stem cells-containing, chitosan-based tissue engineered nerve grafts. [Biomaterials 34: 100-11.](#)
24. Niu, C.C. *et al.* (2014) Identification of mesenchymal stem cells and osteogenic factors in bone marrow aspirate and peripheral blood for spinal fusion by flow cytometry and proteomic analysis. [J Orthop Surg Res. 9: 32.](#)
25. Williamson, K.A. *et al.* (2015) Restricted differentiation potential of progenitor cell populations obtained from the equine superficial digital flexor tendon (SDFT). [J Orthop Res. 33 \(6\): 849-58.](#)
26. Yi, T. *et al.* (2015) Manufacture of Clinical-Grade Human Clonal Mesenchymal Stem Cell Products from Single Colony Forming Unit-Derived Colonies Based on the

- Subfractionation Culturing Method. [Tissue Eng Part C Methods. 21 \(12\): 1251-62.](#)
27. Mumaw, J.L. *et al.* (2015) Feline mesenchymal stem cells and supernatant inhibit reactive oxygen species production in cultured feline neutrophils. [Res Vet Sci. 103: 60-9.](#)
28. Zhang, J. *et al.* (2016) Bone mesenchymal stem cells differentiate into myofibroblasts in the tumor microenvironment. [Oncol Lett. 12 \(1\): 644-50.](#)
29. Morsing, M. *et al.* (2016) Evidence of two distinct functionally specialized fibroblast lineages in breast stroma. [Breast Cancer Res. 18 \(1\): 108.](#)
30. Boccardo, S. *et al.* (2016) Engineered mesenchymal cell-based patches as controlled VEGF delivery systems to induce extrinsic angiogenesis. [Acta Biomater. 42: 127-35.](#)
31. Fernandez-Pernas, P. *et al.* (2017) CD105+-mesenchymal stem cells migrate into osteoarthritis joint: An animal model. [PLoS One. 12 \(11\): e0188072.](#)
32. Lee, H.J. *et al.* (2017) ICOSL expression in human bone marrow-derived mesenchymal stem cells promotes induction of regulatory T cells. [Sci Rep. 7: 44486.](#)
33. Bertolo, A. *et al.* (2017) Oxidative status predicts quality in human mesenchymal stem cells. [Stem Cell Res Ther. 8 \(1\): 3.](#)
34. Santos, V.H.D. *et al.* (2019) Evaluation of alginate hydrogel encapsulated mesenchymal stem cell migration in horses. [Res Vet Sci. 124: 38-45.](#)
35. Lützkendorf, J. *et al.* (2017) Resistance for Genotoxic Damage in Mesenchymal Stromal Cells Is Increased by Hypoxia but Not Generally Dependent on p53-Regulated Cell Cycle Arrest. [PLoS One. 12 \(1\): e0169921.](#)
36. 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.](#)
37. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. [PLoS One. 13 \(2\): e0192244.](#)
38. Olimpio, R.M.C. *et al.* (2018) Cell viability assessed in a reproducible model of human osteoblasts derived from human adipose-derived stem cells. [PLoS One. 13 \(4\): e0194847.](#)
39. Lotfi, R. *et al.* (2018) ATP promotes immunosuppressive capacities of mesenchymal stromal cells by enhancing the expression of indoleamine dioxygenase. [Immun Inflamm Dis. 6 \(4\): 448-55.](#)
40. May, J.E. *et al.* (2018) Chemotherapy-induced genotoxic damage to bone marrow cells: long-term implications. [Mutagenesis. 33 \(3\): 241-251.](#)
41. Rey, F. *et al.* (2019) Adipose-Derived Stem Cells from Fat Tissue of Breast Cancer Microenvironment Present Altered Adipogenic Differentiation Capabilities. [Stem Cells Int. 2019: 1480314.](#)
42. Piñeiro-Ramil, M. *et al.* (2020) Immortalizing Mesenchymal Stromal Cells from Aged Donors While Keeping Their Essential Features. [Stem Cells Int. 2020: 5726947.](#)
43. Kim, M. *et al.* (2020) A Small-Sized Population of Human Umbilical Cord Blood-Derived Mesenchymal Stem Cells Shows High Stemness Properties and Therapeutic Benefit. [Stem Cells Int. 2020: 5924983.](#)
44. Watson, L. *et al.* (2020) Administration of Human Non-Diabetic Mesenchymal Stromal Cells to a Murine Model of Diabetic Fracture Repair: A Pilot Study. [Cells. 9 \(6\): 1394.](#)
45. Cargnoni, A. *et al.* (2020) Amniotic MSCs reduce pulmonary fibrosis by hampering lung B-cell recruitment, retention, and maturation. [Stem Cells Transl Med. 9 \(9\): 1023-35.](#)
46. Kim, S.H. *et al.* (2019) Forkhead box O1 (FOXO1) controls the migratory response of Toll-like receptor (TLR3)-stimulated human mesenchymal stromal cells. [J Biol Chem. 294 \(21\): 8424-37.](#)
47. Manini, I. *et al.* (2020) Heterogeneity Matters: Different Regions of Glioblastoma Are

- Characterized by Distinctive Tumor-Supporting Pathways. [Cancers \(Basel\). 12 \(10\): 2960.](#)
48. Lotfi, R. *et al.* (2020) Validation of Microbiological Testing of Cellular Medicinal Products Containing Antibiotics. [Transfus Med Hemother. 47 \(2\): 144-51.](#)
49. Di Paola, A. *et al.* (2021) Eltrombopag in paediatric immune thrombocytopenia: Iron metabolism modulation in mesenchymal stromal cells. [Br J Haematol. 97 \(1\): 110-119.](#)
50. Piñeiro-Ramil, M. *et al.* (2021) Generation of Mesenchymal Cell Lines Derived from Aged Donors. [Int J Mol Sci. 22 \(19\): 10667.](#)
51. Serrano, L.J. *et al.* (2021) Cell therapy for factor V deficiency: An approach based on human decidua mesenchymal stem cells. [Biomed Pharmacother. 142: 112059.](#)
52. Huang, Q. *et al.* (2021) Human Umbilical Cord Mesenchymal Stem Cells-Derived Exosomal MicroRNA-18b-3p Inhibits the Occurrence of Preeclampsia by Targeting LEP. [Nanoscale Res Lett. 16 \(1\): 27.](#)
53. Murata, D. *et al.* (2022) Osteochondral regeneration of the femoral medial condyle by using a scaffold-free 3D construct of synovial membrane-derived mesenchymal stem cells in horses. [BMC Vet Res. 18 \(1\): 53.](#)
54. Orikasa, S. *et al.* (2022) Hypoxia-inducible factor 1 α induces osteo/odontoblast differentiation of human dental pulp stem cells via Wnt/ β -catenin transcriptional cofactor BCL9. [Sci Rep. 12 \(1\): 682.](#)
55. Freitag, N. *et al.* (2022) Eutopic endometrial immune profile of infertility-patients with and without endometriosis. [J Reprod Immunol. 150: 103489.](#)
56. Morente-López, M. *et al.* (2022) Therapy free of cells vs human mesenchymal stem cells from umbilical cord stroma to treat the inflammation in OA. [Cell Mol Life Sci. 79 \(11\): 557.](#)
57. Creamer, D.G. *et al.* (2022) Influence of exposure to microbial ligands, immunosuppressive drugs and chronic kidney disease on endogenous immunomodulatory gene expression in feline adipose-derived mesenchymal stem cells. [J Feline Med Surg. 24 \(6\): e43-e56.](#)
58. Arnaud-Franco, Á. *et al.* (2022) Effect of Adipose-Derived Mesenchymal Stem Cells (ADMSCs) Application in Achilles-Tendon Injury in an Animal Model. [Curr Issues Mol Biol. 44 \(12\): 5827-38.](#)
59. Piñeiro-Ramil, M. *et al.* (2023) Generation of human immortalized chondrocytes from osteoarthritic and healthy cartilage : a new tool for cartilage pathophysiology studies. [Bone Joint Res. 12 \(1\): 46-57.](#)

Further Reading	<p>1. Carrade, D.D. <i>et al.</i> (2012) Comparative Analysis of the Immunomodulatory Properties of Equine Adult-Derived Mesenchymal Stem Cells. Cell Med. 4: 1-11.</p> <p>2. Burk, J. <i>et al.</i> (2013) Equine cellular therapy--from stall to bench to bedside? Cytometry A 83 (1): 103-13.</p>
------------------------	--

Storage	<p>Prior to reconstitution store at +4°C. Following reconstitution store at +4°C. DO NOT FREEZE.</p> <p>This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
----------------	--

Guarantee	12 months from date of despatch
------------------	---------------------------------

Health And Safety	Material Safety Datasheet documentation #20487 available at:
--------------------------	--

Information <https://www.bio-rad-antibodies.com/SDS/MCA1557PE>
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

America 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](https://www.bio-rad-antibodies.com/datasheets)

'M415959:230119'

Printed on 08 Mar 2024

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)