

# Datasheet: MCA1557SBV475

Description:	MOUSE ANTI HUMAN CD105:StarBright Violet 475		
Specificity:	CD105		
Other names:	ENDOGLIN		
Format:	StarBright Violet 475		
Product Type:	Monoclonal Antibody		
Clone:	SN6		
Isotype:	lgG1		
Quantity:	100 TESTS/0.5ml		

### **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 <u>www.bio-rad-antibodies.com/protocols</u> .						
		Yes No	Not Determined	Suggested Dilution			
	Flow Cytometry			Neat			
	Where this product has not been tested for use in a particular technique this do						
	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 <b>N.B.</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 StarBright Violet 475 - liquid						
Max Ex/Em	Fluorophore	Excitation Max (nm	) Emission Max (nm)				
	StarBright Violet 475	405	479				
Preparation	Purified IgG prepared supernatant	by affinity chromato	ography on Protein G fro	m tissue culture			

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% sodium azide (NaN <sub>3</sub> ) 1% bovine serum albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
Approx. Protein Concentrations	For information on the concentration of our StarBright Dye conjugated reagents please visit our <u>FAQ</u> page.
Immunogen	Partially purified cell membrane antigens from fresh leukemia cells
External Database Links	UniProt:         P17813       Related reagents         Entrez Gene:         2022       ENG       Related reagents
Synonyms	END
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the mouse P3/NS1 /1-Ag4-1 myeloma cell line
Specificity	<b>Mouse anti Human CD105 antibody, clone SN6</b> 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.
Specificity Flow Cytometry	known as CD105. CD105 is a glycoprotein homodimer of ~95 kDa subunits expressed by

7. Sallustio, F. *et al.* (2010) TLR2 plays a role in the activation of human resident renal stem/progenitor cells. <u>FASEB J. 24: 514-25.</u>

8. Arufe, M.C. *et al.* (2010) Chondrogenic potential of subpopulations of cells expressing mesenchymal stem cell markers derived from human synovial membranes. <u>J Cell</u> <u>Biochem. 111: 834-45.</u>

9. Agha-Hosseini, F. *et al.* (2010) *In vitro* isolation of stem cells derived from human dental pulp. <u>Clin Transplant. 24: E23-8.</u>

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. <u>Tissue Eng Part A 16: 3657-67.</u>

11. Jin, H.J. *et al.* (2010) GD2 expression is closely associated with neuronal differentiation of human umbilical cord blood-derived mesenchymal stem cells. <u>Cell Mol Life Sci. 67 (11): 1845-58.</u>

12. 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>

13. Braun, J. *et al.* (2010) Evaluation of the osteogenic and chondrogenic differentiation capacities of equine adipose tissue-derived mesenchymal stem cells. <u>Am J Vet Res. 71</u> (10): 1228-36.

14. Balmayor, E.R. *et al.* (2011) Synthesis and functionalization of superparamagnetic poly- $\varepsilon$ -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. <u>Gut 60: 788-98.</u>

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. <u>Cytometry A 81: 312-23.</u> 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. <u>Turk J Haematol. 30 (2): 115-21.</u>

20. Mehrkens, A. *et al.* (2013) Non-adherent mesenchymal progenitors from adipose tissue stromal vascular fraction. <u>Tissue Eng Part A 20: 1081-8.</u>

21. Kang, S.D. *et al.* (2013) Isolation of Functional Human Endothelial Cells from Small Volumes of Umbilical Cord Blood. <u>Ann Biomed Eng. 41: 2181-92.</u>

22. Cho, H.J. *et al.* (2013) Generation of human secondary cardiospheres as a potent cell processing strategy for cell-based cardiac repair. <u>Biomaterials 34: 651-61.</u>

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. <u>J Orthop Surg Res. 9: 32.</u>

25. Williamson, K.A. *et al.* (2015) Restricted differentiation potential of progenitor cell populations obtained from the equine superficial digital flexor tendon (SDFT). <u>J Orthop</u> <u>Res. 33 (6): 849-58.</u>

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.

Mumaw, J.L. *et al.* (2015) Feline mesenchymal stem cells and supernatant inhibit reactive oxygen species production in cultured feline neutrophils. <u>Res Vet Sci. 103: 60-9.</u>
 Zhang, J. *et al.* (2016) Bone mesenchymal stem cells differentiate into myofibroblasts in the tumor microenvironment. <u>Oncol Lett. 12 (1): 644-50.</u>

29. Morsing, M. *et al.* (2016) Evidence of two distinct functionally specialized fibroblast lineages in breast stroma. <u>Breast Cancer Res. 18 (1): 108.</u>

30. Boccardo, S. *et al.* (2016) Engineered mesenchymal cell-based patches as controlled VEGF delivery systems to induce extrinsic angiogenesis. <u>Acta Biomater. 42: 127-35.</u>

31. Fernandez-Pernas, P. *et al.* (2017) CD105+-mesenchymal stem cells migrate into osteoarthritis joint: An animal model. <u>PLoS One. 12 (11): e0188072.</u>

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. <u>Stem Cell Res Ther. 8 (1): 3.</u>

34. 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. <u>PLoS One. 12 (1): e0169921.</u>

35. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. <u>PLoS One. 13 (2): e0192244.</u>

36. Olimpio, R.M.C. *et al.* (2018) Cell viability assessed in a reproducible model of human osteoblasts derived from human adipose-derived stem cells. <u>PLoS One. 13 (4): e0194847.</u>
37. Lotfi, R. *et al.* (2018) ATP promotes immunosuppressive capacities of mesenchymal stromal cells by enhancing the expression of indoleamine dioxygenase. <u>Immun Inflamm</u> <u>Dis. 6 (4): 448-55.</u>

38. May, J.E. *et al.* (2018) Chemotherapy-induced genotoxic damage to bone marrow cells: long-term implications. <u>Mutagenesis. 33 (3): 241-251.</u>

39. Santos,V.H.D. *et al.* (2019) Evaluation of alginate hydrogel encapsulated mesenchymal stem cell migration in horses. <u>Res Vet Sci. 124: 38-45.</u>

40. Rey, F. *et al.* (2019) Adipose-Derived Stem Cells from Fat Tissue of Breast Cancer Microenvironment Present Altered Adipogenic Differentiation Capabilities. <u>Stem Cells Int.</u> 2019: 1480314.

41. Kim, S.H. *et al.* (2019) Forkhead box O1 (FOXO1) controls the migratory response of Toll-like receptor (TLR3)-stimulated human mesenchymal stromal cells. <u>J Biol Chem. 294</u> (21): 8424-37.

 42. Cargnoni, A. *et al.* (2020) Amniotic MSCs reduce pulmonary fibrosis by hampering lung B-cell recruitment, retention, and maturation. <u>Stem Cells Transl Med. 9 (9): 1023-35.</u>
 43. 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>
 44. Karpyuk, V. *et al.* (2019) Innovation-based Approach in Reconstruction of Reduced Jaw Alveolar Ridge Bone using Cell Regeneration Technologies <u>Archiv Euromedica 9 (2):</u> <u>147-55</u>.

45. Di Paola, A. *et al.* (2021) Eltrombopag in paediatric immune thrombocytopenia: Iron metabolism modulation in mesenchymal stromal cells. <u>Br J Haematol. 97 (1): 110-119.</u>
46. Watson, L. *et al.* (2020) Administration of Human Non-Diabetic Mesenchymal Stromal Cells to a Murine Model of Diabetic Fracture Repair: A Pilot Study. <u>Cells. 9 (6): 1394.</u>

47. 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>
48. 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. <u>Stem Cells Int. 2020: 5924983.</u>

49. Lotfi, R. *et al.* (2020) Validation of Microbiological Testing of Cellular Medicinal Products Containing Antibiotics. <u>Transfus Med Hemother. 47 (2): 144-51.</u>

50. Piñeiro-Ramil, M. *et al.* (2020) Immortalizing Mesenchymal Stromal Cells from Aged Donors While Keeping Their Essential Features. <u>Stem Cells Int. 2020: 5726947.</u>

51. Huang, Q. *et al.* (2021) Human Umbilical Cord Mesenchymal Stem Cells-Derived Exosomal MicroRNA-18b-3p Inhibits the Occurrence of Preeclampsia by Targeting LEP. <u>Nanoscale Res Lett. 16 (1): 27.</u>

52. Piñeiro-Ramil, M. *et al.* (2021) Generation of Mesenchymal Cell Lines Derived from Aged Donors. <u>Int J Mol Sci. 22 (19): 10667.</u>

53. Serrano, L.J. *et al.* (2021) Cell therapy for factor V deficiency: An approach based on human decidua mesenchymal stem cells. <u>Biomed Pharmacother. 142: 112059.</u>

54. Manini, I. *et al.* (2020) Heterogeneity Matters: Different Regions of Glioblastoma Are Characterized by Distinctive Tumor-Supporting Pathways. <u>Cancers (Basel). 12 (10): 2960.</u> 55. 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. <u>BMC Vet Res. 18 (1): 53.</u>

56. Connolly, D.M. *et al.* (2023) Early Human Pathophysiological Responses to Exertional Hypobaric Decompression Stress. <u>Aerosp Med Hum Perform. 94 (10): 738-49.</u>

57. Jakl, V. *et al.* (2023) Effect of Expansion Media on Functional Characteristics of Bone Marrow-Derived Mesenchymal Stromal Cells. <u>Cells. 12 (16): 2105.</u>

58. Orikasa, S. *et al.* (2022) Hypoxia-inducible factor  $1\alpha$  induces osteo/odontoblast differentiation of human dental pulp stem cells via Wnt/ $\beta$ -catenin transcriptional cofactor BCL9. <u>Sci Rep. 12 (1): 682.</u>

59. Tiraihi, T. *et al.* (2023) A Sequential Culturing System for Generating Epithelial-Like Stem Cells from Human Mesenchymal Stem Cells Derived from Adipose Tissue <u>Cell and Tissue Biology. 17 (6): 639-52.</u>

60. Freitag, N. *et al.* (2022) Eutopic endometrial immune profile of infertility-patients with and without endometriosis. <u>J Reprod Immunol. 150: 103489.</u>

61. 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. <u>Cell Mol Life Sci. 79 (11)</u>: <u>557.</u>

62. 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. <u>J Feline Med Surg. 24</u> (<u>6): e43-e56</u>.

63. Arnaud-Franco, Á. *et al.* (2022) Effect of Adipose-Derived Mesenchymal Stem Cells (ADMSCs) Application in Achilles-Tendon Injury in an Animal Model. <u>Curr Issues Mol Biol.</u> <u>44 (12): 5827-38.</u>

64. Morente-López, M. *et al.* (2023) Effect of miR-21 in mesenchymal stem cells-derived extracellular vesicles behavior. <u>Stem Cell Res Ther. 14 (1): 383.</u>

65. Lo, H.Y. *et al.* (2021) High Induction of IL-6 Secretion From hUCMSCs Optimize the Potential of hUCMSCs and TCZ as Therapy for COVID-19-Related ARDS. <u>Cell</u>

	Transplant. 30: 9636897211054481. 66. de Barcelos, M.S. <i>et al.</i> (2024) Extracellular vesicles derived from bovine adipose- derived mesenchymal stromal cells enhance <i>in vitro</i> embryo production from lesioned
	<ul> <li>ovaries <u>Cytotherapy. 20 May [Epub ahead of print].</u></li> <li>67. Moellerberndt, J. <i>et al.</i> (2024) Impact of platelet lysate on immunoregulatory characteristics of equine mesenchymal stromal cells. <u>Front Vet Sci. 11: 1385395.</u></li> <li>68. Piñeiro-Ramil, M. <i>et al.</i> (2023) Generation of human immortalized chondrocytes from extensitive and healthy certilers are new tool for certilers and healthy certilers.</li> </ul>
	osteoarthritic and healthy cartilage : a new tool for cartilage pathophysiology studies. <u>Bone</u> <u>Joint Res. 12 (1): 46-57.</u> 69. Tafuri, W.L. <i>et al.</i> (2022) Skin fibrosis associated with keloid, scleroderma and Jorge Lobo's disease (lacaziosis): An immuno-histochemical study. <u>Int J Exp Pathol. 103 (6):</u> 234-44.
	<ul> <li>70. Giesen, M. <i>et al.</i> (2025) Rap1 Guanosine Triphosphate Hydrolase (GTPase)</li> <li>Regulates Shear Stress-Mediated Adhesion of Mesenchymal Stromal Cells. <u>Biology</u></li> <li>(Basel). 14 (1)Jan 18 [Epub ahead of print].</li> <li>71. Abreu, C.A. <i>et al.</i> (2025) Early ultrastructural damage in retina and optic nerve</li> <li>following intraocular pressure elevation. <u>Vision Res. 227: 108544.</u></li> </ul>
Further Reading	<ol> <li>Carrade, D.D. <i>et al.</i> (2012) Comparative Analysis of the Immunomodulatory Properties of Equine Adult-Derived Mesenchymal Stem Cells. <u>Cell Med. 4: 1-11.</u></li> <li>Burk, J. <i>et al.</i> (2013) Equine cellular therapyfrom stall to bench to bedside? <u>Cytometry A 83 (1): 103-13.</u></li> </ol>
Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA1557SBV475 20471
Regulatory	For research purposes only

## **Related Products**

#### **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
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'M437083:250307'

#### Printed on 23 Apr 2025

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