Datasheet: MCA1557SBUV510

BATCH NUMBER 100006305

Description:	MOUSE ANTI HUMAN CD105:StarBright UltraViolet 510
Specificity:	CD105
Other names:	ENDOGLIN
Format:	StarBright UltraViolet 510
Product Type:	Monoclonal Antibody
Clone:	SN6
Isotype:	IgG1
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 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 StarBright UltraViolet 510 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright UltraViolet 510	340	513

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture

	supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN_3) 1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
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 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 5ul of the suggested working dilution to label 10^6 cells in 100ul. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
References	1. 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. 2. 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. 3. Nagano, M. *et al.* (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. 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. 5. Diaz-Romero, J. *et al.* (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. 6. Agha-Hosseini, F. *et al.* (2010) *In vitro* isolation of stem cells derived from human dental pulp. Clin Transplant. 24: E23-8. 7. 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.
8. 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.
9. Benetti, A. *et al.* (2008) Transforming growth factor-beta1 and CD105 promote the migration of hepatocellular carcinoma-derived endothelium. Cancer Res. 68: 8626-34.
10. Ciccocioppo, R. *et al.* (2011) Autologous bone marrow-derived mesenchymal stromal cells in the treatment of fistulising Crohn's disease. Gut 60: 788-98.
11. 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.
12. 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.
13. Lozanoska-Ochser, B. *et al.* (2008) Expression of CD86 on human islet endothelial cells facilitates T cell adhesion and migration. J Immunol. 181: 6109-16.
14. Sallustio, F. *et al.* (2010) TLR2 plays a role in the activation of human resident renal stem/progenitor cells. FASEB J. 24: 514-25.
15. Tso, C. *et al.* (2012) Phenotypic and functional changes in blood monocytes following adherence to endothelium. PLoS One 7: e37091.
16. 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.
17. 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.
18. 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.
19. Mehrkens, A. *et al.* (2013) Non-adherent mesenchymal progenitors from adipose tissue stromal vascular fraction. Tissue Eng Part A 20: 1081-8.
20. 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.
21. Zhang, J. *et al.* (2016) Bone mesenchymal stem cells differentiate into myofibroblasts in the tumor microenvironment. Oncol Lett. 12 (1): 644-50.
22. Morsing, M. *et al.* (2016) Evidence of two distinct functionally specialized fibroblast lineages in breast stroma. Breast Cancer Res. 18 (1): 108.
23. 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.
24. 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.
25. 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.
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. Boccardo, S. *et al.* (2016) Engineered mesenchymal cell-based patches as controlled

VEGF delivery systems to induce extrinsic angiogenesis. Acta Biomater. 42: 127-35.
28. 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.
29. Bertolo, A. *et al.* (2017) Oxidative status predicts quality in human mesenchymal stem cells. Stem Cell Res Ther. 8 (1): 3.
30. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. PLoS One. 13 (2): e0192244.
31. 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.
32. Lotfi, R. *et al.* (2018) ATP promotes immunosuppressive capacities of mesenchymal stromal cells by enhancing the expression of indoleamine dioxygenase. Immun Inflamm Dis. Oct 10 [Epub ahead of print].
33. Santos,V.H.D. *et al.* (2019) Evaluation of alginate hydrogel encapsulated mesenchymal stem cell migration in horses. Res Vet Sci. 124: 38-45.
34. 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.
35. Manini, I. *et al.* (2020) Heterogeneity Matters: Different Regions of Glioblastoma Are Characterized by Distinctive Tumor-Supporting Pathways. Cancers (Basel). 12 (10) Oct 13 [Epub ahead of print].
36. 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.
37. 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.
38. Piñeiro-Ramil, M. *et al.* (2020) Immortalizing Mesenchymal Stromal Cells from Aged Donors While Keeping Their Essential Features. Stem Cells Int. 2020: 5726947.
39. 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.
40. 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.
41. 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.
42. 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.
43. 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.
44. Lotfi, R. *et al.* (2020) Validation of Microbiological Testing of Cellular Medicinal Products Containing Antibiotics. Transfus Med Hemother. 47 (2): 144-51.
45. 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.
46. Piñeiro-Ramil, M. *et al.* (2021) Generation of Mesenchymal Cell Lines Derived from Aged Donors. Int J Mol Sci. 22 (19)Oct 01 [Epub ahead of print].
47. Fernandez-Pernas, P. *et al.* (2017) CD105+-mesenchymal stem cells migrate into

osteoarthritis joint: An animal model. PLoS One. 12 (11): e0188072.
48. Di Paola, A. *et al.* (2021) Eltrombopag in paediatric immune thrombocytopenia: Iron metabolism modulation in mesenchymal stromal cells. Br J Haematol. Dec 28 [Epub ahead of print].
49. 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.
50. 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.
51. Freitag, N. *et al.* (2022) Eutopic endometrial immune profile of infertility-patients with and without endometriosis J Repro Immunol. 29 Jan: 103489 [Epub ahead of print].
52. 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.
53. 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. : 1098612X221083074.

Further Reading	1. Burk, J. *et al.* (2013) Equine cellular therapy--from stall to bench to bedside? Cytometry A 83 (1): 103-13.
2. Carrade, D.D. *et al.* (2012) Comparative Analysis of the Immunomodulatory Properties of Equine Adult-Derived Mesenchymal Stem Cells. Cell Med. 4: 1-11.
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/MCA1557SBUV510 20471
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

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