

Datasheet: MCA1557SBY720

BATCH NUMBER 100007301

Description:	MOUSE ANTI HUMAN CD105:StarBright Yellow 720	
Specificity:	CD105	
Other names:	ENDOGLIN	
Format:	StarBright Yellow 720	
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 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	
Poactivity	

Target Species

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.

further information.

Human

Product Form	Purified IgG conjugated to StarBright Yellow 720 - liquid
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	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright Yellow 720	548	719

Preparation

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

Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide (NaN ₃)
Stabilisers	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
	<u> 2022</u>
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
	777 ig 1 1 myslema sen ime
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 5µl of the suggested working dilution to label 10 ⁶ cells in 100µl. Best practices
. ion cytomony	suggest a 5 minutes centrifugation at 6,000g prior to sample application.
References	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
	<u>(20): 7898-902.</u>
	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. <u>Blood 95: 3001-9.</u>
	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. Lozanoska-Ochser, B. <i>et al.</i> (2008) Expression of CD86 on human islet endothelial cells
	facilitates T cell adhesion and migration. <u>J Immunol. 181: 6109-16.</u>
	5. Benetti, A. <i>et al.</i> (2008) Transforming growth factor-beta1 and CD105 promote the
	migration of hepatocellular carcinoma-derived endothelium. <u>Cancer Res. 68: 8626-34.</u>
	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>
	7. Sallustio, F. <i>et al.</i> (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> 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. <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-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. <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. Cytometry A 81: 312-23.
- 18. Tso, C. *et al.* (2012) Phenotypic and functional changes in blood monocytes following adherence to endothelium. <u>PLoS One 7: e37091.</u>
- 19. Supokawej, A. *et al.* (2013) Cardiogenic and myogenic gene expression in mesenchymal stem cells after 5-azacytidine treatment. <u>Turk J Haematol.</u> 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. <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 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. <u>Tissue Eng Part C Methods</u>. 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. <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. 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. <u>Immun Inflamm Dis.</u> 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. <u>Stem Cells Int.</u> 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. <u>Stem Cells Transl Med. 9 (9): 1023-35.</u>
- 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. <u>J Biol Chem. 294</u> (21): 8424-37.
- 47. 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>
 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. <u>Br J Haematol. 97 (1): 110-119.</u>
- 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. <u>Biomed Pharmacother.</u> 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 1α 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. <u>J Reprod Immunol. 150: 103489.</u>
- 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. <u>Cell Mol Life Sci. 79 (11):</u> 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. <u>J Feline Med Surg. 24</u> (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. <u>Curr Issues Mol Biol.</u> 44 (12): 5827-38.

Further Reading

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

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/MCA1557SBY720 20471

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Regulatory For research purposes only

Related Products

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M416117:230130'

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