

## Datasheet: MCA1557SBR815

<b>Description:</b>	MOUSE ANTI HUMAN CD105:StarBright Red 815
<b>Specificity:</b>	CD105
<b>Other names:</b>	ENDOGLIN
<b>Format:</b>	StarBright Red 815
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	SN6
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://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 Red 815 - liquid

#### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright Red 815	654	811

#### Preparation

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

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350 0.05% Tween 20
<b>Immunogen</b>	Partially purified cell membrane antigens from fresh leukemia cells
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P17813</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">2022</a>    ENG    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	END
<b>Fusion Partners</b>	Spleen cells from immunized BALB/c mice were fused with cells of the mouse P3/NS1 /1-Ag4-1 myeloma cell line
<b>Specificity</b>	<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.
<b>Flow Cytometry</b>	Use 5µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.
<b>References</b>	<ol style="list-style-type: none"> <li>Haruta, Y. &amp; Seon, B.K. (1986) Distinct human leukemia-associated cell surface glycoprotein GP160 defined by monoclonal antibody SN6. <a href="#">Proc Natl Acad Sci USA 83 (20): 7898-902.</a></li> <li>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. <a href="#">Blood 95: 3001-9.</a></li> <li>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. <a href="#">Blood 110 (1): 151-60.</a></li> <li>Lozanoska-Ochser, B. <i>et al.</i> (2008) Expression of CD86 on human islet endothelial cells facilitates T cell adhesion and migration. <a href="#">J Immunol. 181: 6109-16.</a></li> <li>Benetti, A. <i>et al.</i> (2008) Transforming growth factor-beta1 and CD105 promote the migration of hepatocellular carcinoma-derived endothelium. <a href="#">Cancer Res. 68: 8626-34.</a></li> <li>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. <a href="#">J Cell Physiol. 214: 75-83.</a></li> <li>Sallustio, F. <i>et al.</i> (2010) TLR2 plays a role in the activation of human resident renal stem/progenitor cells. <a href="#">FASEB J. 24: 514-25.</a></li> <li>Arufe, M.C. <i>et al.</i> (2010) Chondrogenic potential of subpopulations of cells expressing</li> </ol>

- 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- $\epsilon$ -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. 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.](#)
35. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. [PLoS One. 13 \(2\): e0192244.](#)
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. [PLoS One. 13 \(4\): e0194847.](#)
37. 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.](#)
38. May, J.E. *et al.* (2018) Chemotherapy-induced genotoxic damage to bone marrow cells: long-term implications. [Mutagenesis. 33 \(3\): 241-251.](#)
39. Santos,V.H.D. *et al.* (2019) Evaluation of alginate hydrogel encapsulated mesenchymal stem cell migration in horses. [Res Vet Sci. 124: 38-45.](#)
40. 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.](#)
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. [J Biol Chem. 294 \(21\): 8424-37.](#)
42. 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.](#)
43. Tripathy, N.K. *et al.* (2018) Cardiomyogenic Heterogeneity of Clonal Subpopulations of Human Bone Marrow Mesenchymal Stem Cells. [J Stem Cells Regen Med. 14 \(1\): 27-33.](#)
44. Karpuyk, V. *et al.* (2019) Innovation-based Approach in Reconstruction of Reduced Jaw Alveolar Ridge Bone using Cell Regeneration Technologies [Archiv Euromedica 9 \(2\): 147-55.](#)
45. 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.](#)
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. [Cells. 9 \(6\): 1394.](#)
47. 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.](#)
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. [Stem Cells Int. 2020: 5924983.](#)
49. Lotfi, R. *et al.* (2020) Validation of Microbiological Testing of Cellular Medicinal Products Containing Antibiotics. [Transfus Med Hemother. 47 \(2\): 144-51.](#)
50. Piñeiro-Ramil, M. *et al.* (2020) Immortalizing Mesenchymal Stromal Cells from Aged Donors While Keeping Their Essential Features. [Stem Cells Int. 2020: 5726947.](#)
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. [Nanoscale Res Lett. 16 \(1\): 27.](#)
52. Piñeiro-Ramil, M. *et al.* (2021) Generation of Mesenchymal Cell Lines Derived from Aged Donors. [Int J Mol Sci. 22 \(19\): 10667.](#)
53. 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.](#)
54. Manini, I. *et al.* (2020) Heterogeneity Matters: Different Regions of Glioblastoma Are Characterized by Distinctive Tumor-Supporting Pathways. [Cancers \(Basel\). 12 \(10\): 2960.](#)
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. [BMC Vet Res. 18 \(1\): 53.](#)
56. Connolly, D.M. *et al.* (2023) Early Human Pathophysiological Responses to Exertional Hypobaric Decompression Stress. [Aerosp Med Hum Perform. 94 \(10\): 738-49.](#)
57. Jakl, V. *et al.* (2023) Effect of Expansion Media on Functional Characteristics of Bone Marrow-Derived Mesenchymal Stromal Cells. [Cells. 12 \(16\): 2105.](#)
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. [Sci Rep. 12 \(1\): 682.](#)
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 [Cell and Tissue Biology. 17 \(6\): 639-52.](#)
60. Freitag, N. *et al.* (2022) Eutopic endometrial immune profile of infertility-patients with and without endometriosis. [J Reprod Immunol. 150: 103489.](#)
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. [Cell Mol Life Sci. 79 \(11\): 557.](#)
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. [J Feline Med Surg. 24 \(6\): e43-e56.](#)
63. 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.](#)
64. Morente-López, M. *et al.* (2023) Effect of miR-21 in mesenchymal stem cells-derived extracellular vesicles behavior. [Stem Cell Res Ther. 14 \(1\): 383.](#)
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. [Cell Transplant. 30: 9636897211054481.](#)
66. de Barcelos, M.S. *et al.* (2024) Extracellular vesicles derived from bovine adipose-derived mesenchymal stromal cells enhance *in vitro* embryo production from lesioned

- ovaries [Cytotherapy. 20 May \[Epub ahead of print\]](#).
67. Moellerberndt, J. *et al.* (2024) Impact of platelet lysate on immunoregulatory characteristics of equine mesenchymal stromal cells. [Front Vet Sci. 11: 1385395.](#)
68. 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.](#)
69. Tafuri, W.L. *et al.* (2022) Skin fibrosis associated with keloid, scleroderma and Jorge Lobo's disease (Iacaziosis): An immuno-histochemical study. [Int J Exp Pathol. 103 \(6\): 234-44.](#)
70. Giesen, M. *et al.* (2025) Rap1 Guanosine Triphosphate Hydrolase (GTPase) Regulates Shear Stress-Mediated Adhesion of Mesenchymal Stromal Cells. [Biology \(Basel\). 14 \(1\)Jan 18 \[Epub ahead of print\].](#)
71. Abreu, C.A. *et al.* (2025) Early ultrastructural damage in retina and optic nerve following intraocular pressure elevation. [Vision Res. 227: 108544.](#)

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**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? [Cytometry A 83 \(1\): 103-13.](#)

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**Storage** Store at +4°C. DO NOT FREEZE.  
This product should be stored undiluted.

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**Guarantee** 12 months from date of despatch

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**Acknowledgements** This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts

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**Health And Safety Information** Material Safety Datasheet documentation #20471 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1557SBR815>  
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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Printed on 31 Jan 2025