

## Datasheet: MCA1738SBV515

**BATCH NUMBER 64708946**

<b>Description:</b>	MOUSE ANTI HUMAN CD31:StarBright Violet 515
<b>Specificity:</b>	CD31
<b>Other names:</b>	PECAM-1
<b>Format:</b>	StarBright Violet 515
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	WM59
<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: Cynomolgus monkey, Rhesus Monkey

**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 Violet 515 - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright Violet 515	402	516

### Preparation

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

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin 0.1% Pluronic F68 0.1% PEG 3350
<b>Approx. Protein Concentrations</b>	For information on the concentration of our StarBright Dye conjugated reagents please visit our <a href="#">FAQ</a> page.
<b>External Database Links</b>	<p><b>UniProt:</b> <a href="#">P16284</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b> <a href="#">5175</a>    PECAM1    <a href="#">Related reagents</a></p>
<b>Specificity</b>	<p><b>Mouse anti Human CD31 monoclonal antibody, clone WM59</b> recognizes the human CD31 antigen, a ~130 kDa single pass type I transmembrane glycoprotein bearing six <a href="#">C2 immunoglobulin domains</a>. CD31 is expressed by all continuous endothelia including arteries, veins and non-sinusoidal capillaries, platelets, granulocytes and some lymphocytes. CD31 is not expressed by discontinuous endothelia such as hepatic sinusoids and splenic red pulp (<a href="#">Muller et al. 1989</a>). CD31 is also known as PECAM-1.</p> <p>The binding epitope for mouse anti human CD31, clone WM59 has been mapped to the Ig-like domain 2 (<a href="#">Fawcett et al. 1995</a>).</p>
<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>Paul, G. <i>et al.</i> (2012) The adult human brain harbors multipotent perivascular mesenchymal stem cells. <a href="#">PLoS One. 7: e35577.</a></li> <li>Urquhart, P. <i>et al.</i> (2007) Carbon monoxide-releasing molecules modulate leukocyte-endothelial interactions under flow. <a href="#">J Pharmacol Exp Ther. 321 (2): 656-62.</a></li> <li>Reedquist, K.A. <i>et al.</i> (2000) The small GTPase, Rap1, mediates CD31-induced integrin adhesion. <a href="#">J Cell Biol. 148: 1151-8.</a></li> <li>Vernon-Wilson, E.F. <i>et al.</i> (2007) CD31 delays phagocyte membrane repolarization to promote efficient binding of apoptotic cells. <a href="#">J Leukoc Biol. 82: 1278-88.</a></li> <li>Hilbe W <i>et al.</i> (2003) Immunohistochemical typing of non-small cell lung cancer on cryostat sections: correlation with clinical parameters and prognosis. <a href="#">J Clin Pathol. 56 (10): 736-41.</a></li> <li>Stein, A. <i>et al.</i> (2010) Local erythropoietin and endothelial progenitor cells improve regional cardiac function in acute myocardial infarction. <a href="#">BMC Cardiovasc Disord. Sep; 10:43.</a></li> <li>Woollard, K.J. <i>et al.</i> (2002) Direct modulatory effect of C-reactive protein on primary human monocyte adhesion to human endothelial cells. <a href="#">Clin Exp Immunol. 130: 256-62.</a></li> <li>Theberge, A.B. <i>et al.</i> (2015) Microfluidic multiculture assay to analyze biomolecular signaling in angiogenesis. <a href="#">Anal Chem. 87 (6): 3239-46.</a></li> </ol>

9. Hilbe W *et al.* (2004) CD133 positive endothelial progenitor cells contribute to the tumour vasculature in non-small cell lung cancer. [J Clin Pathol. 57 \(9\): 965-9.](#)
10. Palakkan, A.A. *et al.* (2015) Polarisation and functional characterisation of hepatocytes derived from human embryonic and mesenchymal stem cells. [Biomed Rep. 3 \(5\): 626-636.](#)
11. Newey SE *et al.* (2014) The hematopoietic chemokine CXCL12 promotes integration of human endothelial colony forming cell-derived cells into immature vessel networks. [Stem Cells Dev. 23 \(22\): 2730-43.](#)
12. Fabre-Mersseman V *et al.* (2011) CD4<sup>+</sup> recent thymic emigrants are infected by HIV in vivo, implication for pathogenesis. [AIDS. 25 \(9\): 1153-62.](#)
13. Patten PE *et al.* (2008) CD38 expression in chronic lymphocytic leukemia is regulated by the tumor microenvironment. [Blood. 111 \(10\): 5173-81.](#)
14. Katz SC *et al.* (2004) Liver sinusoidal endothelial cells are insufficient to activate T cells. [J Immunol. 173 \(1\): 230-5.](#)
15. Pfisterer K *et al.* (2015) CD90(+) human dermal stromal cells are potent inducers of FoxP3(+) regulatory T cells. [J Invest Dermatol. 135 \(1\): 130-41.](#)
16. Hale, S.J. *et al.* (2015) CXCR2 modulates bone marrow vascular repair and haematopoietic recovery post-transplant. [Br J Haematol. 169 \(4\): 552-64.](#)
17. Muthana, M. *et al.* (2015) Directing cell therapy to anatomic target sites in vivo with magnetic resonance targeting. [Nat Commun. 6: 8009.](#)
18. Schuster, C. *et al.* (2015) Development of Blood and Lymphatic Endothelial Cells in Embryonic and Fetal Human Skin. [Am J Pathol. 185 \(9\): 2563-74.](#)
19. Somers, E. *et al.* (2016) Vascular Defects and Spinal Cord Hypoxia in Spinal Muscular Atrophy. [Ann Neurol. 79 \(2\): 217-30.](#)
20. Soh, B.S. *et al.* (2016) Endothelin-1 supports clonal derivation and expansion of cardiovascular progenitors derived from human embryonic stem cells. [Nat Commun. 7: 10774.](#)
21. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. [PLoS One. 13 \(2\): e0192244.](#)
22. Duque, J.C. *et al.* (2019) Vascularization of the arteriovenous fistula wall and association with maturation outcomes. [J Vasc Access. : 1129729819863584. \[Epub ahead of print\]](#)
23. Kim, J.S. *et al.* (2021) Randomization to Omega-3 Fatty Acid Supplementation and Endothelial Function in COPD: The COD-Fish Randomized Controlled Trial. [Chronic Obstr Pulm Dis. 8\(1\): 41-53.](#)
24. Bye, A.P. *et al.* (2018) Immobilization of Nonactivated Unfixed Platelets for Real-Time Single-Cell Analysis. [Methods Mol Biol. 1812: 1-11.](#)
25. Chai, S. *et al.* (2022) Identification of epithelial and mesenchymal circulating tumor cells in clonal lineage of an aggressive prostate cancer case. [NPJ Precis Oncol. 6 \(1\): 41.](#)
26. Bettin, L. *et al.* (2023) Co-stimulation by TLR7/8 ligand R848 modulates IFN- $\gamma$  production of porcine  $\gamma\delta$  T cells in a microenvironment-dependent manner. [Dev Comp Immunol. 138: 104543.](#)
27. Seo, J. *et al.* (2023) Plasticity of circulating tumor cells in small cell lung cancer. [Sci Rep. 13 \(1\): 11775.](#)
28. Shishido, S.N. *et al.* (2024) Cancer-related cells and oncosomes in the liquid biopsy of pancreatic cancer patients undergoing surgery. [NPJ Precis Oncol. 8 \(1\): 36.](#)
29. Bai, L. *et al.* (2024) Longitudinal tracking of circulating rare events in the liquid biopsy

of stage III-IV non-small cell lung cancer patients. [Discov Oncol. 15 \(1\): 142.](#)

---

<b>Further Reading</b>	1. DeLisser, H.M. <i>et al.</i> (1994) Molecular and functional aspects of PECAM-1/CD31. <a href="#">Immunol Today. 15 (10): 490-5.</a>
<b>Storage</b>	This product is shipped at ambient temperature. Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
<b>Guarantee</b>	12 months from date of despatch
<b>Acknowledgements</b>	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20438 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1738SBV515">https://www.bio-rad-antibodies.com/SDS/MCA1738SBV515</a>
<b>Regulatory</b>	For research purposes only

---

## Related Products

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](http://bio-rad-antibodies.com/datasheets)  
'M440233:250523'

**Printed on 02 Apr 2026**