

Datasheet: MCA2459PE

BATCH NUMBER 151679

Description:	MOUSE ANTI HUMAN CD138:RPE
Specificity:	CD138
Other names:	SYNDECAN-1
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	B-A38
Isotype:	IgG1
Quantity:	100 TESTS

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 - 1/5

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Human		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by ion exchange chromatography		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1%	Bovine Serum Albumin	
	5%	Sucrose	

Immunogen	U266 cell line.
External Database Links	<p>UniProt: P18827 Related reagents</p> <p>Entrez Gene: 6382 SDC1 Related reagents</p>
Synonyms	SDC
RRID	AB_566513
Fusion Partners	Spleen cells from immunized Balb/c (Iffa Credo) mice were fused with cells of the mouse X63/Ag.8653 myeloma cell line.
Specificity	<p>Mouse anti human CD138 antibody, clone B-A38 recognizes human CD138, also known as Syndecan-1 (SDC-1). CD138 is a member of the transmembrane heparan sulfate proteoglycan family (O'Connell et al. 2004, Sanderson et al. 2008). It is composed of a core protein (comprising 3 domains; a short cytoplasmic domain, a transmembrane domain, and a long extracellular domain) and covalently attached heparan sulfate chains (Sanderson et al. 2008).</p> <p>Syndecan-1 is expressed on the surface of plasma cells within the hematopoietic system and on the surface of mature epithelial cells (O'Connell et al. 2004). It acts as an extracellular matrix receptor, involved in many cellular functions, including cell binding, cell signaling and cytoskeletal organization through cell-cell adhesion and cell-matrix adhesion (Sanderson et al. 2008).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> Borset, M. <i>et al.</i> (1993) Lack of IL-1 secretion from human myeloma cells highly purified by immunomagnetic separation. Br J Haematol. 85 (3): 446-51. Du, S. <i>et al.</i> (2010) Systemic mastocytosis in association with chronic lymphocytic leukemia and plasma cell myeloma. Int J Clin Exp Pathol. 3 (4): 448-57. Kylänpää, L. <i>et al.</i> (2009) Syndecan-1 and tenascin expression in cystic tumors of the pancreas. JOP. 10 (4): 378-82. Beauvais, D.M. <i>et al.</i> (2009) Syndecan-1 regulates alphavbeta3 and alphavbeta5 integrin activation during angiogenesis and is blocked by synstatin, a novel peptide inhibitor. J Exp Med. 206: 691-705. Beauvais, D.M. and Rapraeger, A.C. (2010) Syndecan-1 couples the insulin-like growth factor-1 receptor to inside-out integrin activation J Cell Sci. 123: 3796-807. Kim, Y.C. <i>et al.</i> (2010) Presence of <i>Porphyromonas gingivalis</i> and plasma cell dominance in gingival tissues with periodontitis. Oral Dis. 16: 375-81. Chang, H. <i>et al.</i> (2010) CKS1B nuclear expression is inversely correlated with p27Kip1 expression and is predictive of an adverse survival in patients with multiple myeloma. Haematologica. 95: 1542-7. Mahshid Y <i>et al.</i> (2009) High expression of 5-lipoxygenase in normal and malignant

- mantle zone B lymphocytes. [BMC Immunol. 10: 2.](#)
9. Guedez, L. *et al.* (2005) Tissue inhibitor of metalloproteinase 1 (TIMP-1) promotes plasmablastic differentiation of a Burkitt lymphoma cell line: implications in the pathogenesis of plasmacytic/plasmablastic tumors. [Blood. 105: 1660-8.](#)
10. Li, K. *et al.* (2010) Anaplastic lymphoma kinase-positive diffuse large B-cell lymphoma presenting as an isolated nasopharyngeal mass: a case report and review of literature. [Int J Clin Exp Pathol. 4: 190-6.](#)
11. Yang, Y. *et al.* (2007) The syndecan-1 heparan sulfate proteoglycan is a viable target for myeloma therapy. [Blood. 110: 2041-8.](#)
12. Thauinat, O. *et al.* (2010) Chronic rejection triggers the development of an aggressive intragraft immune response through recapitulation of lymphoid organogenesis. [J Immunol. 185: 717-28.](#)
13. Cannizzo, E. *et al.* (2012) The role of CD19 and CD27 in the diagnosis of multiple myeloma by flow cytometry: a new statistical model. [Am J Clin Pathol. 137 \(3\): 377-86.](#)
14. Li, K. *et al.* (2012) A rare and unique case of aggressive IgE- γ plasma cell myeloma in a 28-year-old woman presented initially as an orbital mass. [Hum Pathol. 43: 2376-84.](#)
15. Christianson, H.C. *et al.* (2013) Cancer cell exosomes depend on cell-surface heparan sulfate proteoglycans for their internalization and functional activity. [Proc Natl Acad Sci U S A. 110 \(43\): 17380-5.](#)
16. Malminen, M. *et al.* (2002) Functional expression of NF1 tumor suppressor protein: association with keratin intermediate filaments during the early development of human epidermis. [BMC Dermatol. 2: 10.](#)
17. Itoua Maïga, R. *et al.* (2014) Flow cytometry assessment of *in vitro* generated CD138+ human plasma cells. [Biomed Res Int. 2014: 536482.](#)
18. Di Niro, R. *et al.* (2016) Responsive population dynamics and wide seeding into the duodenal lamina propria of transglutaminase-2-specific plasma cells in celiac disease. [Mucosal Immunol. 9 \(1\): 254-64.](#)
19. Yigit, N. *et al.* (2015) Nuclear factor-erythroid 2, nerve growth factor receptor, and CD34-microvessel density are differentially expressed in primary myelofibrosis, polycythemia vera, and essential thrombocythemia. [Hum Pathol. 46 \(8\): 1217-25.](#)
20. Lum, D. & Wong, K.P. (2006) Sarcomatoid plasmacytoma: a diagnosis not often considered. [Pathology. 38 \(6\): 593-6.](#)
21. Gill, J. *et al.* (2009) A case of hyperIgG4 disease or IgG4-related sclerosing disease presenting as retroperitoneal fibrosis, chronic sclerosing sialadenitis and mediastinal lymphadenopathy. [Pathology. 41 \(3\): 297-300.](#)
22. Adepu, S. *et al.* (2015) Incipient renal transplant dysfunction associates with tubular syndecan-1 expression and shedding. [Am J Physiol Renal Physiol. 309 \(2\): F137-45.](#)
23. Hara, S. *et al.* (2016) Distribution and components of interstitial inflammation and fibrosis in IgG4-related kidney disease: analysis of autopsy specimens. [Hum Pathol. 55: 164-73.](#)
24. Hosseini, A. *et al.* (2016) Morphometric analysis of inflammation in bronchial biopsies following exposure to inhaled diesel exhaust and allergen challenge in atopic subjects. [Part Fibre Toxicol. 13: 2.](#)
25. Uenoyama, A. *et al.* (2016) Effects of C-xylopyranoside derivative on epithelial regeneration in an *in vitro* 3D oral mucosa model. [Biosci Biotechnol Biochem. 80 \(7\): 1344-55.](#)
26. Hourai, R. *et al.* (2017) IgG4-positive cell infiltration in various cardiovascular disorders

- results from histopathological analysis of surgical samples. [BMC Cardiovasc Disord. 17 \(1\): 52.](#)

27. Nagata, K. *et al.* (2017) Epstein-Barr Virus Lytic Reactivation Activates B Cells Polyclonally and Induces Activation-Induced Cytidine Deaminase Expression: A Mechanism Underlying Autoimmunity and Its Contribution to Graves' Disease. [Viral Immunol. Mar 23. \[Epub ahead of print\]](#)

28. Tran, D.N. *et al.* (2017) Polychromatic flow cytometry is more sensitive than microscopy in detecting small monoclonal plasma cell populations. [Cytometry B Clin Cytom. 92 \(2\): 136-144.](#)

29. Puchalapalli, M. *et al.* (2019) The Laminin- α 1 Chain-Derived Peptide, AG73, Binds to Syndecans on MDA-231 Breast Cancer Cells and Alters Filopodium Formation. [Anal Cell Pathol \(Amst\). 2019: 9192516.](#)

30. Mittal, S. *et al.* (2013) Lymphoid aggregates that resemble tertiary lymphoid organs define a specific pathological subset in metal-on-metal hip replacements. [PLoS One. 8 \(5\): e63470.](#)

31. Egeland, N.G. *et al.* (2020) MiR-18a and miR-18b are expressed in the stroma of oestrogen receptor alpha negative breast cancers. [BMC Cancer. 20 \(1\): 377.](#)

32. Forsberg, P.A. *et al.* (2019) Cellular proliferation by multiplex immunohistochemistry identifies aggressive disease behavior in relapsed multiple myeloma. [Leuk Lymphoma. 60 \(8\): 2085-7.](#)

33. Ebian, F.H. *et al.* (2021) Predictive Value of CD229, CD319 and c-Maf Overexpression for Treatment Response in Multiple Myeloma Patients [Egypt J Hosp Med. 85 \(1\): 3157-65.](#)

34. Hara, S. *et al.* (2019) High Level Estradiol Induces EBV Reactivation and EBV gp350/220(+)/CD138(+) Double-positive B Cell Population in Graves' Disease Patients and Healthy Controls. [Yonago Acta Med. 62 \(2\): 240-243.](#)

Further Reading

1. Anttonen, A. *et al.* (1999) Syndecan-1 expression has prognostic significance in head and neck carcinoma. [Br J Cancer. 79 \(3-4\): 558-64.](#)
2. O'Connell, F.P. *et al.* (2004) CD138 (syndecan-1), a plasma cell marker immunohistochemical profile in hematopoietic and nonhematopoietic neoplasms. [Am J Clin Pathol. 121:254-63.](#)
3. Sanderson, R.D. *et al.* (2008) Syndecan-1: a dynamic regulator of the myeloma microenvironment. [Clin Exp Metastasis. 25:149-59.](#)

Storage

Prior to reconstitution store at +4°C following reconstitution store at +4°C.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2459PE>
20487

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

Recommended Useful Reagents

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

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

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M375498:210104'

Printed on 05 Feb 2024