

Datasheet: MCA2459F

Description:	MOUSE ANTI HUMAN CD138:FITC
Specificity:	CD138
Other names:	SYNDECAN-1
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	B-A38
Isotype:	IgG1
Quantity:	0.1 mg

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 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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525
Preparation	Purified IgG prepared by ion exchange chromatography from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml		

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_566510
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"> 1. 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. 2. Guedez, L. <i>et al.</i> (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. 3. Lum, D. & Wong, K.P. (2006) Sarcomatoid plasmacytoma: a diagnosis not often considered. Pathology. 38 (6): 593-6. 4. Yang, Y. <i>et al.</i> (2007) The syndecan-1 heparan sulfate proteoglycan is a viable target for myeloma therapy. Blood. 110: 2041-8. 5. 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. 6. Mahshid Y <i>et al.</i> (2009) High expression of 5-lipoxygenase in normal and malignant mantle zone B lymphocytes. BMC Immunol. 10: 2. 7. Gill, J. <i>et al.</i> (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.

8. Kylänpää, L. *et al.* (2009) Syndecan-1 and tenascin expression in cystic tumors of the pancreas. [JOP. 10 \(4\): 378-82.](#)
9. 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.](#)
10. Kim, Y.C. *et al.* (2010) Presence of *Porphyromonas gingivalis* and plasma cell dominance in gingival tissues with periodontitis. [Oral Dis. 16: 375-81.](#)
11. Chang, H. *et al.* (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.](#)
12. 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.](#)
13. Thauvat, 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.](#)
14. Du, S. *et al.* (2010) Systemic mastocytosis in association with chronic lymphocytic leukemia and plasma cell myeloma. [Int J Clin Exp Pathol. 3 \(4\): 448-57.](#)
15. 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.](#)
16. 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.](#)
17. 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.](#)
18. Itoua Maïga, R. *et al.* (2014) Flow cytometry assessment of *in vitro* generated CD138+ human plasma cells. [Biomed Res Int. 2014: 536482.](#)
19. 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.](#)
20. 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.](#)
21. 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.](#)
22. 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.](#)
23. 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.](#)
24. 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.](#)
25. 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. 30 \(3\): 240-9.](#)

26. 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.](#)
27. 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.](#)
28. 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.](#)
29. 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.](#)
30. 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.](#)
31. 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.](#)
32. Elbezanti, W.O. *et al.* (2022) Development of a novel Bruton's tyrosine kinase inhibitor that exerts anti-cancer activities potentiates response of chemotherapeutic agents in multiple myeloma stem cell-like cells. [Front Pharmacol. 13: 894535.](#)
33. Muñoz, U. *et al.* (2022) Main Role of Antibodies in Demyelination and Axonal Damage in Multiple Sclerosis. [Cell Mol Neurobiol. 42 \(6\): 1809-27.](#)
34. Campeiro, J.D. *et al.* (2023) Crotonamine/siRNA Nanocomplexes for Functional Downregulation of Syndecan-1 in Renal Proximal Tubular Epithelial Cells. [Pharmaceutics. 15 \(6\): 1576.](#)
35. Liu, D. *et al.* (2021) Glucocorticoids Elevate *Pseudomonas aeruginosa* Binding to Airway Epithelium by Upregulating Syndecan-1 Expression. [Front Microbiol. 12: 725483.](#)
36. Lammerts, R.G.M. *et al.* (2020) Properdin Pattern Recognition on Proximal Tubular Cells Is Heparan Sulfate/Syndecan-1 but Not C3b Dependent and Can Be Blocked by Tick Protein Salp20. [Front Immunol. 11: 1643.](#)
37. Shaalan, W. *et al.* (2024) Decreased expression of Syndecan- 1 (CD138) in the endometrium of adenomyosis patients suggests a potential pathogenetic role. [Acta Obstet Gynecol Scand. Nov 20 \[Epub ahead of print\].](#)

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

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be

protected from light.

Guarantee	12 months from date of despatch
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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA2459F 10041
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Regulatory	For research purposes only
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Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

Recommended Useful Reagents

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

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

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