Datasheet: MCA2459F

BATCH NUMBER 157026

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

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.1 mg/ml

Immunogen	U266 cell line.
External Database Links	**UniProt:** P18827 Related reagents **Entrez Gene:** 6382 SDC1 Related reagents
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	**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). 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).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Borset, M. *et al.* (1993) Lack of IL-1 secretion from human myeloma cells highly purified by immunomagnetic separation. Br J Haematol. 85 (3): 446-51. 2. 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. 3. Kylänpää, L. *et al.* (2009) Syndecan-1 and tenascin expression in cystic tumors of the pancreas. JOP. 10 (4): 378-82. 4. Beauvais, D.M. *et al.* (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. 5. 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. 6. Kim, Y.C. *et al.* (2010) Presence of *Porphyromonas gingivalis* and plasma cell dominance in gingival tissues with periodontitis. Oral Dis. 16: 375-81. 7. 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. 8. Mahshid Y *et al.* (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. Thaunat, 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. May 28 [Epub ahead of print]
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-α1 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.

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	Store at +4°C or at -20°C if preferred. This product should be stored undiluted. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. 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 #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA2459F 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

North & South America	Tel: +1 800 265 7376 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

'M366950:200529'

Printed on 05 Feb 2024