Datasheet: MCA2459GA

Description:	MOUSE ANTI HUMAN CD138
Specificity:	CD138
Other names:	SYNDECAN-1
Format:	Purified
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
Immunohistology - Frozen	▪			1/100 - 1/500
Immunohistology - Paraffin (1)	▪			1/100 - 1/500
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			
Immunofluorescence	▪			
Functional Assays (2)	▪			

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.

(1)**This product requires heat pre-treatment. Sodium citrate buffer pH6.0 is recommended for this purpose.**

(2) **This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays. Bio-Rad recommend the use of EQU003 for this purpose.**

Target Species	Human
Product Form	Purified IgG - liquid
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	IgG concentration 0.1 mg/ml

Concentrations	
Immunogen	U266 cell line.
External Database Links	**UniProt:** P18827 Related reagents **Entrez Gene:** 6382 SDC1 Related reagents
Synonyms	SDC
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.
Histology Positive Control Tissue	Bone Marrow
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.

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. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos., DyLight®488, DyLight®549, DyLight®649, DyLight®680, DyLight®800, FITC, HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

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

'M288234:160607'

Printed on 19 May 2018