

Datasheet: MCA2459T

**BATCH NUMBER 168858**

<b>Description:</b>	MOUSE ANTI HUMAN CD138
<b>Specificity:</b>	CD138
<b>Other names:</b>	SYNDECAN-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	B-A38
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 ml

## 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
Immunohistology - Frozen	▪			1/100 - 1/500
Immunohistology - Paraffin (1)	▪			1/100 - 1/500
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			
Immunofluorescence	▪			

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.**

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by ion exchange chromatography from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline

<b>Preservative Stabilisers</b>	0.09% Sodium Azide 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1mg/ml
<b>Immunogen</b>	U266 cell line.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P18827</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">6382</a>    SDC1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	SDC
<b>RRID</b>	AB_566509
<b>Fusion Partners</b>	Spleen cells from immunized Balb/c (Iffa Credo) mice were fused with cells of the mouse X63/Ag.8653 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti human CD138 antibody, clone B-A38</b> recognizes human CD138, also known as Syndecan-1 (SDC-1). CD138 is a member of the transmembrane heparan sulfate proteoglycan family (<a href="#">O'Connell et al. 2004</a>, <a href="#">Sanderson et al. 2008</a>). 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 (<a href="#">Sanderson et al. 2008</a>).</p> <p>Syndecan-1 is expressed on the surface of plasma cells within the hematopoietic system and on the surface of mature epithelial cells (<a href="#">O'Connell et al. 2004</a>). 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 (<a href="#">Sanderson et al. 2008</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>Immunohistology</b>	This product requires heat pre-treatment. Sodium citrate buffer pH6.0 is recommended for this purpose.
<b>Histology Positive Control Tissue</b>	Bone Marrow
<b>References</b>	<ol style="list-style-type: none"> <li>Borset, M. <i>et al.</i> (1993) Lack of IL-1 secretion from human myeloma cells highly purified by immunomagnetic separation. <a href="#">Br J Haematol. 85 (3): 446-51.</a></li> <li>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. <a href="#">Blood. 105: 1660-8.</a></li> <li>Lum, D. &amp; Wong, K.P. (2006) Sarcomatoid plasmacytoma: a diagnosis not often</li> </ol>

- considered. [Pathology. 38 \(6\): 593-6.](#)
4. Yang, Y. *et al.* (2007) The syndecan-1 heparan sulfate proteoglycan is a viable target for myeloma therapy. [Blood. 110: 2041-8.](#)
  5. 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.](#)
  6. Mahshid Y *et al.* (2009) High expression of 5-lipoxygenase in normal and malignant mantle zone B lymphocytes. [BMC Immunol. 10: 2.](#)
  7. 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.](#)
  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- $\gamma$  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- $\alpha$ 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) Crotamine/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.

---

**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/MCA2459T>  
10041

---

**Regulatory** For research purposes only

---

## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)  
Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)  
Goat Anti Mouse IgG (STAR76...) [RPE](#)  
Goat Anti Mouse IgG (STAR70...) [FITC](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)  
Goat Anti Mouse IgG (STAR77...) [HRP](#)

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

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

'M410721:221028'

Printed on 19 Dec 2024