

## Technical Data Sheet

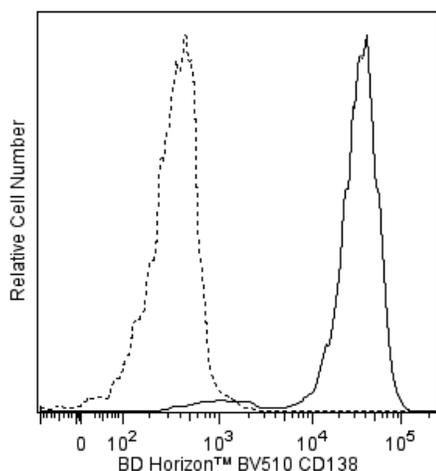
**BV510 Mouse Anti-Human CD138****Product Information**

<b>Material Number:</b>	<b>563091</b>
<b>Alternate Name:</b>	Syndecan; SDC; Syndecan 1; SDC1; SYND1
<b>Size:</b>	50 tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	MI15
<b>Immunogen:</b>	Human U266 and XG-1 Myeloma Cell Lines
<b>Isotype:</b>	Mouse (BALB/c) IgG1, κ
<b>Reactivity:</b>	QC Testing: Human
<b>Workshop:</b>	VI BP100, B005
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The MI15 monoclonal antibody specifically binds to CD138 (Syndecan-1), an 85-92 kDa single chain transmembrane protein, strongly expressed on multiple-myeloma-derived cell lines and malignant plasma cell populations. It is also expressed on pre-B cells, immature B cells, and plasma cells, but not on mature circulating B-lymphocytes. Syndecan-1 is a member of the family of transmembrane heparan sulfate proteoglycans. It is also expressed on some non-hematopoietic cells, including embryonic mesenchymal cells, vascular smooth muscle cells, endothelial and neural cells. CD138 binds to many extracellular matrix proteins through its heparan sulfate side-chains, like fibronectin, collagen types I, III, and V, tenascin, thrombospondin, and antithrombin III. It is considered an extracellular matrix receptor that may serve as a co-receptor for fibroblast growth factor and related molecules. Monoclonal antibody MI15 blocks the binding of clone B-B4 but not clone DL-101 (other anti-syndecan-1 antibodies) by flow cytometric analysis.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



**Flow cytometric analysis of CD138 expression on U266 cells.** Human U266 cells (ATCC TIB-196™) were stained with either BD Horizon™ BV510 Mouse anti-Human CD138 antibody (Cat. No. 563091, solid line histogram) or a BD Horizon™ BV510 mIgG1, κ Isotype Control (Cat. No. 562946; dashed line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

**Preparation and Storage**

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

**Application Notes****Application**

Flow cytometry

Routinely Tested

**BD Biosciences**

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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562946	BV510 Mouse IgG1, k Isotype Control	50 µg	X40

## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100-µl experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
5. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
7. Brilliant Violet™ 510 is a trademark of Sirigen.

## References

Barclay NA, Brown MH, Birkeland ML, et al, ed. *The Leukocyte Antigen FactsBook*. San Diego, CA: Academic Press; 1997. (Biology)

Costes V, Magen V, Legouffe E, et al. The Mi15 monoclonal antibody (anti-syndecan-1) is a reliable marker for quantifying plasma cells in paraffin-embedded bone marrow biopsy specimens. *Hum Pathol*. 1999; 30(12):1405-1411. (Immunogen: Immunohistochemistry)

Gattei V, Godeas C, Degan M, Rossi FM, Aldinucci D, Pinto A. Characterization of anti-CD138 monoclonal antibodies as tools for investigating the molecular polymorphism of syndecan-1 in human lymphoma cells. *Br J Haematol*. 1999; 104(1):152-162. (Clone-specific: Flow cytometry, Immunoprecipitation)

Horvathova M, Gaillard JP, Liautard J, Duperray C, Lavabre-Bertrand T, Bourquard P, Rossi JF, Klein B, Brochier J. Identification of novel and specific antigens of human plasma cells by mAb. In: Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leucocyte Typing V: White Cell Differentiation Antigens*. New York, NY: Oxford University Press; 1995:713-714. (Immunogen: Blocking, Flow cytometry, Immunoprecipitation)

Wijdenes J, Clément C, Klein B, Dore J-M. CD138 (syndecan-1) Workshop Panel report. In: Kishimoto T, Kikutani H, von dem Borne AEGK, ed. *Leukocyte Typing VI: White Cell Differentiation Antigens*. New York: Garland Publishing Inc; 1998:249-252. (Clone-specific: Flow cytometry)

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