

## Technical Data Sheet

## Purified Rat Anti-Mouse CD138

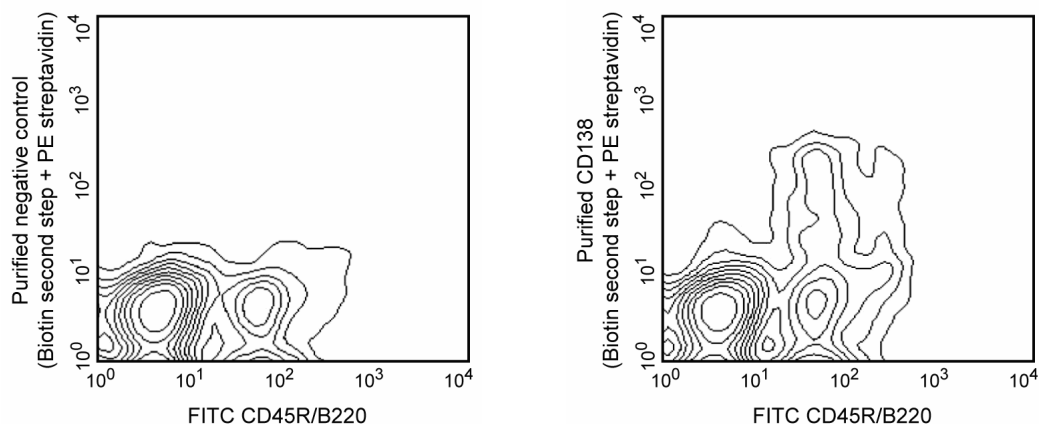
## Product Information

Material Number:	553712
Alternate Name:	Syndecan-1
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	281-2
Immunogen:	NAMRU mouse mammary gland epithelial cell line NMuMG
Isotype:	Rat (F344) IgG2a, $\kappa$
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The 281-2 antibody reacts with the core protein of CD138 (Syndecan-1), a cell-surface, integral membrane heparan sulfate- and chondroitin sulfate-containing proteoglycan that binds to interstitial extracellular matrix molecules. Syndecan-1 is predominantly expressed on epithelial cells, where its expression correlates with normal epithelial organization. It is also expressed on B lymphocytes at specific stages during their differentiation: precursor B cells in the bone marrow and antibody-secreting cells, including plasma cells, but not mature peripheral B cells. It is thus implicated in mediating B cell-matrix interactions. CD138 expression is also regulated during embryonic development, and the molecule shows a tissue- specific structural polymorphism resulting from different post-translational modifications. The 281-2 antibody may be used to detect the differently glycosylated forms, because it reacts with the core protein. Furthermore, the mAb detects the Syndecan-1 ectodomain which is cleaved from cell surfaces by a metalloproteinase.

This antibody is routinely tested by flow cytometric analysis. Other application were tested at BD Biosciences Pharmingen during development only or reported in the literature.



*Expression of CD138 on mouse bone-marrow B lymphocytes. BALB/c bone-marrow leukocytes were stained with purified 281-2 mAb (Right panel), followed by biotinylated goat anti-rat Ig (Cat. no. 554014, both panels), then blocked with normal rat serum (both panels) and stained with Streptavidin-PE (Cat. no. 554061, both panels) and FITCconjugated RA3-6B2 mAb (anti-mouse CD45R/B220, Cat. no. 553087/553088, both panels). Flow cytometry was performed on a BD FACScan™ Flow Cytometry System.*

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

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## Application Notes

### Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
ELISA	Reported
Immunohistochemistry-paraffin	Reported
Western blot	Reported

### Recommended Assay Procedure:

CD138 is expressed at low density on cells in the normal bone marrow; therefore, it may be desirable to amplify staining by using a biotinylated second-step antibody followed by a "bright" third-step reagent, such as Streptavidin-PE (Cat. no. 554061). Other reported applications include western blot analysis using a cationic blotting membrane and a specific method, ELISA, and immunohistochemical staining of acetone-fixed frozen and paraffin-embedded sections.

### Suggested Companion Products

Catalog Number	Name	Size	Clone
554014	Biotin Goat Anti-Rat Specific Polyclonal Antibody	0.5 mg	Polyclonal
553087	FITC Rat Anti-Mouse CD45R/B220	0.1 mg	RA3-6B2
553927	Purified Rat IgG2a, $\kappa$ Isotype Control	0.5 mg	R35-95
554061	PE Streptavidin	0.5 mg	(none)

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [wwwbdbiosciences.com/pharming/en/protocols](http://wwwbdbiosciences.com/pharming/en/protocols) for technical protocols.
3. 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.

### References

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