Technical Data Sheet

Purified Rat Anti-Mouse CD138

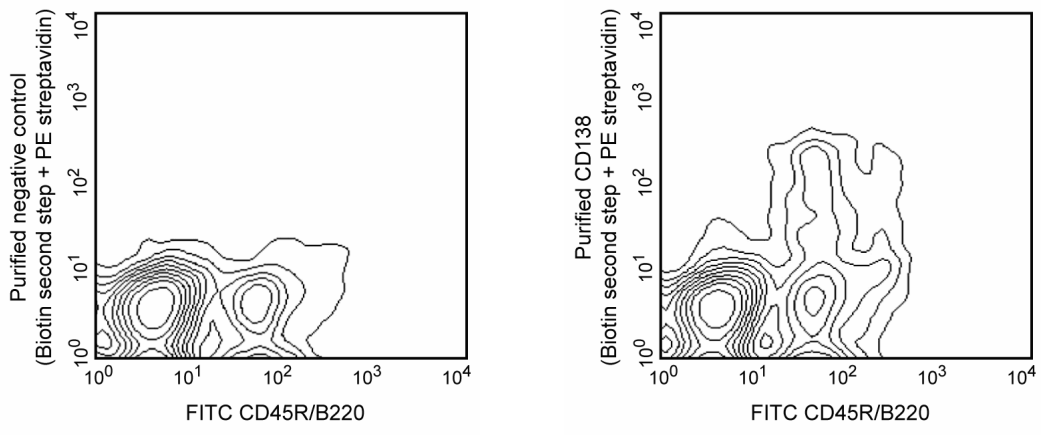
Product Information

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, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤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 litererature.



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, κ 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 www.bdbiosciences.com/pharmingen/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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