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 literature.

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.

BD Biosciences

www.bdbiosciences.com
United States Canada Europe Japan Asia Pacific Latin America/Caribbean
877.232.8995 888.259.0187 32.53.720.550 0120.855.590 65.6861.0633 55.11.5185.9995
For country-specific contact information, visit www.bdbiosciences.com/how_to_order/
Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.
For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale. BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2007 BD
Application Notes

<table>
<thead>
<tr>
<th>Application</th>
<th>Tested During Development</th>
<th>Routinely Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow cytometry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunohistochemistry-frozen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELISA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunohistochemistry-paraffin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western blot</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>554014</td>
<td>Biotin Goat Anti-Rat Specific Polyclonal Antibody</td>
<td>0.5 mg</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>553087</td>
<td>FITC Rat Anti-Mouse CD45R/B220</td>
<td>0.1 mg</td>
<td>RA3-6B2</td>
</tr>
<tr>
<td>553927</td>
<td>Purified Rat IgG2a, κ Isotype Control</td>
<td>0.5 mg</td>
<td>R35-95</td>
</tr>
<tr>
<td>554061</td>
<td>PE Streptavidin</td>
<td>0.5 mg</td>
<td>(none)</td>
</tr>
</tbody>
</table>

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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


Lalor PA, Nossal GJ, Sanderson RD, McHeyzer-Williams MG. Functional and molecular characterization of single, (4-hydroxy-3-nitrophenyl)acetyl (NP) specific, IgG1+ B cells from antibody-secreting and memory B cell pathways in the C57BL/6 immune response to NP. Eur J Immunol. 1992; 22(11):3001-3011. (Biology: Western blot)

