

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

Syndecans are transmembrane proteoglycans characterized by an extracellular core protein bearing covalently linked glycosaminoglycans (GAG), which are long, unbranched carbohydrate polymers (1). Syndecans are a four member family in vertebrates, including syndecan-1 or CD138, syndecan-2 or fibroglycan, syndecan-3 or N-syndecan, and syndecan-4 or amphiglycan. Syndecans are abundant on the surface of all adherent mammalian cells (2).

CD138 / syndecan-1 protein backbone is a single chain molecule of 30.5 kDa (3). Five putative GAG attachment sites exist in the extracellular domain (3). The addition of GAG chains to the protein backbone of syndecans is constitutive and critical, since these provide all of the known extracellular ligand binding sites on syndecans (1). In general, GAG fine structure appears to reflect the cellular source of the syndecan.

Expression of CD138 / syndecan-1 in human hematopoietic cells is restricted to plasma cells in normal bone marrow (3). Peripheral blood monocytes, T- and B-lymphocytes are not reactive to CD138. Tonsil cells and early B-cell precursors in human bone marrow also are CD138-negative.

CD138 / syndecan-1 is also expressed in a variety of mature tissues, including epithelial cells, endothelial cells, fibroblasts, keratinocytes and normal hepatocytes (1, 3). CD138 / syndecan-1 is proposed to have a variety of roles depending on the expressing cell types, and on the size and composition of carried heparan sulfates (3). It may act as an essential regulator of ligand-specific activation of primary signalling receptors at the cell surface, by co-engagement of various accessory ligands (1).

REAGENT

IOTest CD138-APC
 Conjugated antibody
 PN A87787 - 50 tests - Liquid - 10 µL/test*

Clone B-A38
Isotype IgG1, Mouse
Immunogen U266 cell line
Hybridoma X63 x spleen B cells
Source Ascites fluid
Purification Affinity chromatography
Conjugation Allophycocyanin (APC)
Molar Ratio APC / Ig : 0.5 - 1.5
Fluorescence Excites at 633 nm
 Emits at 660 nm

REAGENT CONTENTS

This antibody is provided in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin.

STATEMENTS OF WARNING

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be considered potentially infectious and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
4. Do not use antibody beyond the expiration date on the label.
5. Do not expose reagents to strong light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze.

REAGENT PREPARATION

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SELECTED RESEARCH REFERENCES

1. Carey, D., "Syndecans: Multifunctional cell-surface co receptors", 1997, *Biochem. J.*, 327, 1-16.
2. Subramanian, S.V., Fitzgerald, M.L., Bernfield, M., "Regulated shedding of syndecan-1 and -4 ectodomains by thrombin and growth factor receptor activation", 1997, *J. Biol. Chem.*, 272, 14713-14720.
3. Wijdenes, J., Clement, C., Klein, B., Dore, J.M., "CD138 (syndecan-1) Workshop panel report", 1997, *Leucocyte Typing VI, White Cell Differentiation Antigens*. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 249-252.

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MANUFACTURED BY :

IMMUNOTECH SAS
 a Beckman Coulter Company
 130, avenue de Lattre de Tassigny
 B.P. 177 - 13276 Marseille Cedex 9
 France

For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

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Printed in France.
 Made in France.

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(*): 10 µL is the quantity of product sufficient to stain 5 x 10⁵ cells in a standard immunofluorescence assay

