

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-PE Conjugated Antibody
PN A40316 – 2 mL Liquid – 20 µL / test*.

Clone	B-A38
Isotype	IgG1, mouse
Immunogen	U266 cell line
Hybridoma	X63/Ag.8653 myeloma x Balb/c spleen cells
Source	Ascites fluid

Purification Ion exchange or affinity chromatography

Conjugation R-phycoerythrin (PE) is conjugated at 0.5 – 1.5 moles of PE per mole of Ig.

Fluorescence PE (orange-red)
Excites at 486 – 580 nm
Emits at 568 – 590 nm

REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN₃) as preservative, and 2.0 mg / mL bovine serum albumin (BSA).

STATEMENT OF WARNINGS

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. Do not use antibody beyond the expiration date on the label.
3. Samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
4. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
5. Minimize exposure of reagent to 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. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this PE-labeled reagent (clear colorless to pinkish liquid) or any major variation in values obtained for control samples may indicate

deterioration and the reagent should not be used.

REAGENT PREPARATION

No preparation 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.

PRODUCT AVAILABILITY

IOTest CD138-PE Conjugated Antibody
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PE is licensed under patent 4,520,110.

For additional information in the USA, call 800-526-7694.
Outside the USA, contact your local Beckman Coulter representative.

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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

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

