

Anti-CD138 (B-A38) Antibody, Paramagnetic

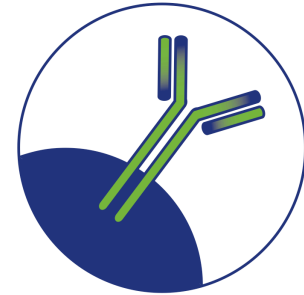
Model # R2140

WAVESENSE

Intended Use:

For In Vitro Diagnostic Use.

This product is intended for selective recovery/enrichment of cells expressing the CD138 cell surface antigen in biological fluids and tissue culture.



Description:

Anti-CD138 (B-A38) Particles are submicron, uniform diameter, superparamagnetic beads coated with mouse monoclonal Syndecan-1 (B-A38) antibody. The CD138 antibody was generated against human Syndecan-1 of human origin. Syndecan-1, also designated CD138 is a type 1 integral membrane proteoglycan, consisting of 310 amino acids, that contains both chondroitin sulfate and heparan sulfate groups. The core protein of Syndecan-1 consists of 3 domains, an ectodomain (extracellular domain), transmembrane domain and cytoplasmic domain. The antibody recognizes the ectodomain consisting of 252 amino acids with 3 highly conserved serine-glycine sites for heparan sulfate attachment at amino acids 37, 24 and 47 near the N terminal of the core protein, and 2 highly conserved serine-glycine sites for chondroitin sulfate attachment at amino acids 210 and 220, adjacent to the cell membrane. Cell capture is achieved by paramagnetic labeling with CD138 antibody of cells expressing CD138 in biological specimens and culture.

Supplied As:

Catalog #	Contains
R2140-1	1 mL

1 mg of B-A38 coupled paramagnetic particles in 1 mL of 0.02 M Phosphate Buffer pH 7.4, 0.15 M NaCl, 1.0% BSA, 0.09% Sodium Azide.

Storage:

This product is stable when stored at 4 – 8°C. DO NOT FREEZE. DO NOT STORE AT ROOM TEMPERATURE. Refer to product label for expiration date.

Other Information:

Resuspend particles prior to each use by inversion or gentle pulse vortexing several times. Avoid causing foam when resuspending particles. Generally, 25 µL to 100 µL of antibody will be sufficient to capture cells in specimen volumes up to 5 mL.

Material Safety Data:

When handling this material Standard Laboratory Practices should be followed. This material's chemical, physical and toxicological properties have not been thoroughly investigated. Contains Sodium Azide as a preservative. Although, the quantity of Sodium Azide (0.09%) is very small, measures should be taken to avoid skin and eye contact, inhalation and ingestion. Sodium Azide (NaN₃) may react with lead and copper plumbing to form potentially explosive metal oxides. Upon disposal, flush with a large volume of water to prevent azide build-up.

References:

1. Sanderson, R.D., Lalor, P. and Bernfield, M. 1989. B lymphocytes express and lose Syndecan at specific stages of differentiation. *Cell Regul.* 1: 27-35.
2. Bernfield, M., Kokenyesi, R., Kato, M., Hinkes, M.T., Spring, J., Gallo, R.L. and Lose, E.J. 1992. Biology of the syndecans: a family of transmembrane heparan sulfate proteoglycans. *Annu. Rev. Cell Biol.* 8: 365-393.
3. David, G. 1993. Integral membrane heparan sulfate proteoglycans. *FASEB J.* 7: 1023-1030.
4. Kokenyesi, R. and Bernfield, M. 1994. Core protein structure and sequence determine the site and presence of heparan sulfate and chondroitin sulfate on Syndecan-1. *J. Biol. Chem.* 269: 12304-12309.



15339 Barranca Pkwy
Irvine, CA 92618 USA
www.WaveSense.net

Toll Free: 800.807.7760
Phone: 949.341.1980
Fax: 949.341.1982
Contact@WaveSense.net

ML110112-22
© 01/25/12

Page 1 of 2

Anti-CD138 (B-A38) Antibody, Paramagnetic

Model # R2140

WAVESENSE

5. Kato, M., Wang, H., Bernfield, M., Gallagher, J.T. and Turnbull, J.E. 1994. Cell surface Syndecan-1 on distinct cell types differs in fine structure and Ligand binding of its heparan sulfate chains. *J. Biol. Chem.* 269: 18881-18890.
6. Couchman, J.R. and Woods, A. 1996. Syndecans, signaling and cell adhesion. *J. Cell Biochem.* 61: 578-584.
7. Carey, D.J., Bendt, K.M. and Stahl, R.C. 1996. The cytoplasmic domain of Syndecan-1 is required for cytoskeleton association but not detergent insolubility. Identification of essential cytoplasmic domain residues. *J. Biol. Chem.* 271: 15253-15260.
8. Bayer-Garner, I. B., et al. 2001. Immunoreactivity in Bone Marrow Biopsies of Multiple Myeloma: Shed Syndecan-1 Accumulates in Fibrotic Regions. *Mod Pathol* 14 (10): 1052-1058.
9. Kumar-Singh, D., et al. 1999. Syndecan-1 Expression in Malignant Mesothelioma: Correlation with Cell Differentiation, WT1 Expression, and Clinical Outcome. *J. Pathology* 186 (3): 300-305.
10. Gattei, V., et al. 1999. Characterization of Anti-138 Monoclonal Antibodies as Tools for Investigating the Molecular Polymorphism of Syndecan-1 in Human Lymphoma Cells. *Dr. J. Haematol* 104: 152-162.
11. Juuti, A., et al. 2005. Syndecan-1 Expression – A Novel Prognostic Marker in Pancreatic Cancer. *Oncology* 68 (2-3): 97-106.
12. Madhav, V., et al. 1998. Syndecan-1 Is a Multifunctional Regulator of Myeloma Pathobiology: Control of Tumor Cell Survival, Growth and Bone Cell Differentiation. *Blood* 91(8): 2679-2688.
13. Fujiya, M., Et al. 2005. Reduced Expression of Syndecan-1 Affects Metastatic Potential and Clinical Outcome in Patients wit Colorectal Cancer. *Cancer Science* 92 (10): 1074-1081.
14. Roh, Y.H., et al. 1999. Syndecan-1 Expression in Gallbladder Cancer and Its Prognostic Significance. *European Surgical Research* 41 (2): 245-250.
15. Al-Agh Osama M., et al. 2010. CD138 (Syndecan-1) in Thymic Tumors: Correlation with Various World Health Organization Types and Clinical Outcome. *J. Clin. Pathol* 3 (3): 2880-2887.
16. Dhodapkar, M.V. and Sanderson, R.D. 1999. Sydecan-1 (CD138) in Myeloma and Lymphoid Malignancies: A Multifunctional Regulator of Cell Behavior Within the Tumor Microenvironment. *Inform Healthcare – Leukemia & Lymphoma* 34 (1-2): 35-43.

Product Specification Sheet



15339 Barranca Pkwy
Irvine, CA 92618 USA
www.WaveSense.net

Toll Free: 800.807.7760
Phone: 949.341.1980
Fax: 949.341.1982
Contact@WaveSense.net

ML110112-22
© 01/25/12

Page 2 of 2