

Syndecan-1 (5G72): sc-73096

BACKGROUND

Syndecan-1 (SYND1), also designated CD138, is a type I integral membrane proteoglycan that contains both chondroitin sulfate and heparan sulfate groups. It is expressed in mouse on pre-B cells, immature B cells and plasma cells. Syndecan-1 is also found on the basolateral surfaces of epithelial cells, endothelial cells of sprouting capillaries and embryonic condensing mesenchymal cells. Syndecan-1 functions as an extracellular matrix receptor which binds to collagens, Fibronectin and Thrombospondin. It has been shown to co-localize with Actin-rich filaments and may act to link the cytoskeleton to the extracellular matrix.

REFERENCES

- 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.
- 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.
- David, G. 1993. Integral membrane heparan sulfate proteoglycans. *FASEB J.* 7: 1023-1030.
- 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.
- 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.
- Couchman, J.R. and Woods, A. 1996. Syndecans, signaling and cell adhesion. *J. Cell. Biochem.* 61: 578-584.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: SDC1 (human) mapping to 2p24.1; Sdc1 (mouse) mapping to 12 A1.1.

SOURCE

Syndecan-1 (5G72) is a mouse monoclonal antibody raised against the u266 myeloma cell line of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% stabilizer protein.

Syndecan-1 (5G72) is available conjugated to either phycoerythrin (sc-73096 PE) or fluorescein (sc-73096 FITC), 100 tests in 2 ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Syndecan-1 (5G72) is recommended for detection of Syndecan-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for Syndecan-1 siRNA (h): sc-36587, Syndecan-1 siRNA (m): sc-36586, Syndecan-1 shRNA Plasmid (h): sc-36587-SH, Syndecan-1 shRNA Plasmid (m): sc-36586-SH, Syndecan-1 shRNA (h) Lentiviral Particles: sc-36587-V and Syndecan-1 shRNA (m) Lentiviral Particles: sc-36586-V.

Molecular Weight of Syndecan-1: 85 kDa.

Positive Controls: Syndecan-1 (h2): 293T Lysate: sc-159118, SW480 cell lysate: sc-2219 or MCF7 whole cell lysate: sc-2206.

DATA



Syndecan-1 (5G72): sc-73096. Western blot analysis of Syndecan-1 expression in non-transfected: sc-117752 (A) and human Syndecan-1 transfected: sc-159118 (B) 293T whole cell lysates.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **Syndecan-1 (A-6): sc-390791** for Syndecan-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.