

Syndecan-4 (C-13): sc-33913

BACKGROUND

Syndecans are type I integral membrane proteoglycans that contain both chondroitin sulfate and heparan sulfate groups. Syndecans are involved in cell-extracellular matrix adhesion and growth factor binding. Syndecan-1 (SYND1, also called CD138) is an extracellular matrix receptor which binds to collagens, Fibronectin and Thrombospondin. Syndecan-1 and Syndecan-3 (also designated N-Syndecan) interact with MK (midkine), a growth/differentiation factor involved in embryogenesis of the central nervous system. Syndecan-2 (also designated fibroglycan) is highly expressed at areas of high morphogenetic activity, such as epithelial-mesenchymal interfaces and the prechondrogenic and preosteogenic mesenchymal condensations. Syndecan-4 (also designated amphiglycan or ryudocan) functions cooperatively with integrins in the processes of cell spreading, focal adhesion assembly and actin stress fiber assembly.

REFERENCES

- Sanderson, R.D., et al. 1992. Adhesion of B lymphoid (MPC-11) cells to type I collagen is mediated by integral membrane proteoglycan, Syndecan. *J. Immunol.* 148: 3902-3911.
- David, G., et al. 1993. Spatial and temporal changes in the expression of Fibroglycan (Syndecan-2) during mouse embryonic development. *Development* 119: 841-854.
- Salmivirta, M., et al. 1995. Syndecan family of cell surface proteoglycans: developmentally regulated receptors for extracellular effector molecules. *Experientia* 51: 863-872.
- Nakanishi, T., et al. 1997. Expression of Syndecan-1 and -3 during embryogenesis of the central nervous system in relation to binding with midkine. *J. Biochem.* 121: 197-205.
- Saoncella, S., et al. 1999. Syndecan-4 signals cooperatively with integrins in a Rho-dependent manner in the assembly of focal adhesions and actin stress fibers. *Proc. Natl. Acad. Sci. USA* 96: 2805-2810.

CHROMOSOMAL LOCATION

Genetic locus: SDC4 (human) mapping to 20q13.12, SDC2 (human) mapping to 8q22.1; Sdc4 (mouse) mapping to 2 H3, Sdc2 (mouse) mapping to 15 B3.1

SOURCE

Syndecan-4 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Syndecan-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33913 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Syndecan-4 (C-13) is recommended for detection of Syndecan-4 and Syndecan-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Syndecan-4 (C-13) is also recommended for detection of Syndecan-4 and Syndecan-2 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Syndecan-4: 24 kDa.

Positive Controls: A-673 cell lysate: sc-2414, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Song, Y., et al. 2011. Role of syndecan-4 side chains in turkey satellite cell growth and development. *Dev. Growth Differ.* 53: 97-109.

STORAGE

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

PROTOCOLS

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



Try **Syndecan-4 (5G9): sc-12766**, our highly recommended monoclonal alternative to Syndecan-4 (C-13). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Syndecan-4 (5G9): sc-12766**.