SANTA CRUZ BIOTECHNOLOGY, INC.

Syndecan-4 (N-19): sc-9497

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 invloved 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 cooperativley with integrins in the processes of cell spreading, focal adhesion assembly and Actin stress fiber assembly.

CHROMOSOMAL LOCATION

Genetic locus: SDC4 (human) mapping to 20q13.12; Sdc4 (mouse) mapping to 2 H3.

SOURCE

Syndecan-4 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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-9497 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Syndecan-4 (N-19) is recommended for detection of Syndecan-4 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Syndecan-4 (N-19) is also recommended for detection of Syndecan-4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Syndecan-4 siRNA (h): sc-36588, Syndecan-4 siRNA (m): sc-36589, Syndecan-4 shRNA Plasmid (h): sc-36588-SH, Syndecan-4 shRNA Plasmid (m): sc-36589-SH, Syndecan-4 shRNA (h) Lentiviral Particles: sc-36588-V and Syndecan-4 shRNA (m) Lentiviral Particles: sc-36589-V.

Molecular Weight of Syndecan-4: 24 kDa.

Positive Controls: Syndecan-4 (m): 293T Lysate: sc-127622, Hep G2 cell lysate: sc-2227 or A-673 cell lysate: sc-2414.

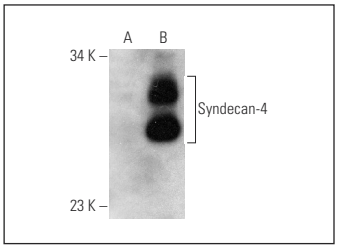
RESEARCH USE

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

STORAGE

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

DATA



Syndecan-4 (N-19): sc-9497. Western blot analysis of Syndecan-4 expression in non-transfected: sc-117752 (**A**) and mouse Syndecan-4 transfected: sc-127622 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bhat, A., et al. 1997. Interactions of Cbl with Bcr-Abl and Crkl in Bcr-Abl transformed myeloid cells. J. Biol. Chem. 272: 16170-16175.
2. Chaudhuri, P., et al. 2005. Protein kinase Cδ-dependent phosphorylation of syndecan-4 regulates cell migration. Circ. Res. 97: 674-681.
3. Pakula, R., et al. 2007. Syndecan-1/CD147 association is essential for cyclophilin B-induced activation of p44/42 mitogen-activated protein kinases and promotion of cell adhesion and chemotaxis. Glycobiology 17: 492-503.
4. Saito, Y., et al. 2007. A peptide derived from Tenascin-C induces Integrin β1 activation through Syndecan-4. J. Biol. Chem. 282: 34929-34937.
5. Kennedy, L., et al. 2007. CCN2 is necessary for the function of mouse embryonic fibroblasts. Exp. Cell Res. 313: 952-964.
6. Wen, J., et al. 2007. Syndecans are differentially expressed during the course of aortic aneurysm formation. J. Vasc. Surg. 46: 1014-1025.
7. Ogawa, T., et al. 2007. The short arm of laminin γ2 chain of laminin-5 (laminin-332) binds syndecan-1 and regulates cellular adhesion and migration by suppressing phosphorylation of integrin β4 chain. Mol. Biol. Cell 18: 1621-1633.
8. Pruessmeyer, J., et al. 2010. A disintegrin and metalloproteinase 17 (ADAM17) mediates inflammation-induced shedding of syndecan-1 and -4 by lung epithelial cells. J. Biol. Chem. 285: 555-564.