

Syndecan 4 Antibody



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	29	Rabbit	#P31431	6385

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Syndecan 4 Antibody recognizes endogenous levels of total Syndecan 4 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro103 of human Syndecan 4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Syndecans are a family of type 1 transmembrane heparan sulfate proteoglycans comprising four members in mammals (SDC1-4) (1) encoded by four syndecan genes. Syndecans are involved in embryonic development, tumorigenesis, and angiogenesis (2). The extracellular domain harbors attachment sites for heparan sulfate and chondroitin sulfate chains, facilitating interaction with an array of proteins, including a plethora of growth factors. In addition, the hydrophobic C-terminal intracellular domain can interact with proteins containing a PDZ domain (2). These interactions place syndecans as important integrators of membrane signaling (3). Syndecans undergo proteolytic cleavage causing the release of their extracellular domain (shedding), converting the membrane-bound proteins into soluble molecular effectors (4).

Syndecan 4 is expressed ubiquitously and is enriched in the focal adhesions of various adherent cell types (5). Syndecan 4 controls focal adhesion formation and regulates cell migration through interaction with Rho family GTPase and protein kinase C family members (6-11). Phosphorylation of the cytoplasmic domain is linked to ectodomain shedding of Syndecan 4, both of which contribute to the regulation of cytokinesis (12).

Background References

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4. Manon-Jensen, T. et al. (2010) *FEBS J* 277, 3876-89.
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6. Harrington, E.O. et al. (1997) *J Biol Chem* 272, 7390-7.
7. Oh, E.S. et al. (1997) *J Biol Chem* 272, 8133-6.
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11. Bishop, A.L. and Hall, A. (2000) *Biochem J* 348 Pt 2, 241-55.
12. Keller-Pinter, A. et al. (2010) *Cell Mol Life Sci* 67, 1881-94.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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