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Syndecan 1 (D4Y7H) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, FC-FP	H	Endogenous	180-250, 70	Rabbit IgG	#P18827	6382

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:50
1:200 - 1:800

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Syndecan 1 (D4Y7H) Rabbit mAb recognizes endogenous levels of multimeric form of syndecan 1 protein. This antibody cross-reacts with proteins of unknown origin between 46-60 kDa in some cell lines.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala294 of human syndecan 1 protein.

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 1 (SDC1) is a specific marker for plasmacytic differentiation in hematologic disorders (5-7). This cell surface proteoglycan is also expressed in normal epithelial cells and tissues as well as various types of cancer tissues (8-11). The extracellular shed form of syndecan 1 remains soluble or accumulates in the extracellular matrix where it binds growth factors, cytokines and other extracellular matrix proteins (12,13). This binding activates signaling of bound growth factors or cytokines, which results in enhanced tumor growth, dissemination, angiogenesis, and osteolysis (14-17). As a result, the level of syndecan1 protein and its shed form may serve as prognostic factors for a list of malignancies (6,18,19). Syndecan 1 has recently been found to be a critical mediator of macropinocytosis in pancreatic cancer (20).

Background References

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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

WB: Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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