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SDC1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1901a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P18827
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	1A3H4
Isotype	IgG1
Calculated MW	32462
Description	The protein encoded by this gene is a transmembrane (type I) heparan sulfate proteoglycan and is a member of the syndecan proteoglycan family. The syndecans mediate cell binding, cell signaling, and cytoskeletal organization and syndecan receptors are required for internalization of the HIV-1 tat protein. The syndecan-1 protein functions as an integral membrane protein and participates in cell proliferation, cell migration and cell-matrix interactions via its receptor for extracellular matrix proteins. Altered syndecan-1 expression has been detected in several different tumor types. While several transcript variants may exist for this gene, the full-length natures of only two have been described to date. These two represent the major variants of this gene and encode the same protein.
Immunogen	Purified recombinant fragment of human SDC1 (AA: 28-171) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	6382
Other Names	Syndecan-1, SYND1, CD138, SDC1, SDC
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SDC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SDC1 (HGNC:10658)
Synonyms	SDC
Function	Cell surface proteoglycan that contains both heparan sulfate and chondroitin sulfate and that links the cytoskeleton to the interstitial matrix (By similarity). Regulates exosome biogenesis in concert with SDCBP and PDCD6IP (PubMed:22660413). Able to induce its own expression in dental mesenchymal cells and also in the neighboring dental epithelial cells via an MSX1-mediated pathway (By similarity).
Cellular Location	Membrane; Single-pass type I membrane protein. Secreted Secreted, extracellular exosome Note=Shedding of the ectodomain produces a soluble form
Tissue Location	Detected in placenta (at protein level) (PubMed:32337544). Detected in fibroblasts (at protein level) (PubMed:36213313).

Background

The multi-pass membrane protein encoded by this gene belongs to the G-protein coupled receptor 3 family and GABA-B receptor subfamily. The GABA-B receptors inhibit neuronal activity through G protein-coupled second-messenger systems, which regulate the release of neurotransmitters, and the activity of ion channels and adenylyl cyclase. This receptor subunit forms an active heterodimeric complex with GABA-B receptor subunit 1, neither of which is effective on its own. Allelic variants of this gene have been associated with nicotine dependence. ; ;

References

1. Am J Clin Pathol. 2012 Mar;137(3):423-8. 2. PLoS One. 2011;6(9):e25252.

Images

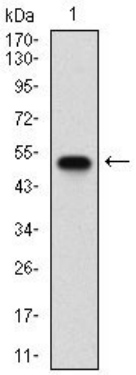

Figure 1: Western blot analysis using SDC1 mAb against human SDC1 (AA: 28-171) recombinant protein. (Expected MW is 44.4 kDa)

Figure 2: Western blot analysis using SDC1 mAb against HEK293 (1) and SDC1 (AA: 28-171)-hIgGFc transfected HEK293 (2) cell lysate.

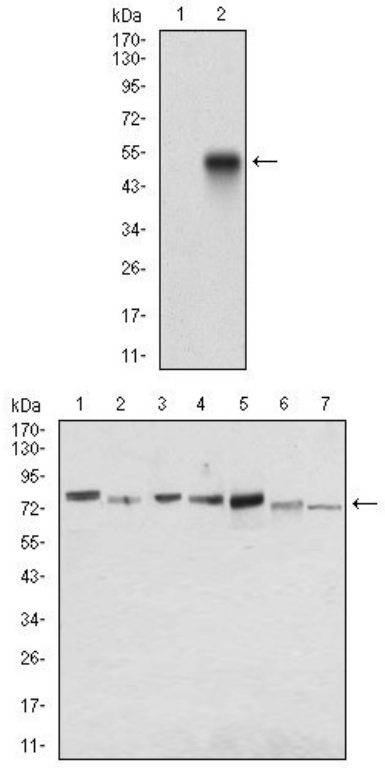

Figure 3: Western blot analysis using SDC1 mouse mAb against MCF-7 (1), Hela (2), HepG2 (3), T47D (4), SW620 (5), Jurkat (6) and NIH/3T3 (7) cell lysate.

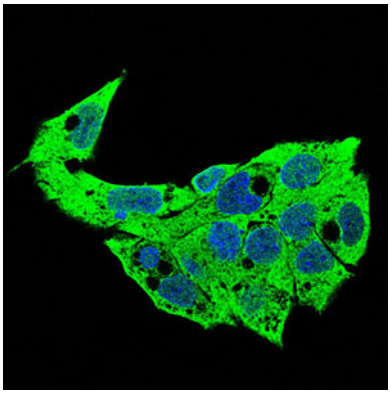

Figure 4: Immunofluorescence analysis of HepG2 cells using SDC1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Secondary antibody from Fisher (Cat#: 35503)

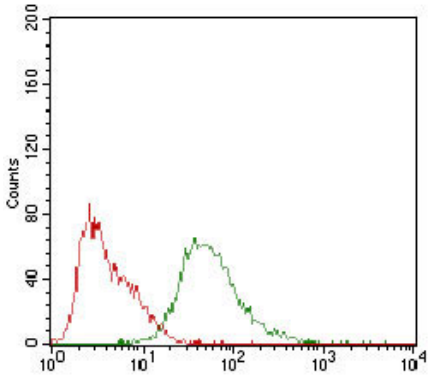

Figure 5: Flow cytometric analysis of HepG2 cells using SDC1 mouse mAb (green) and negative control (red).

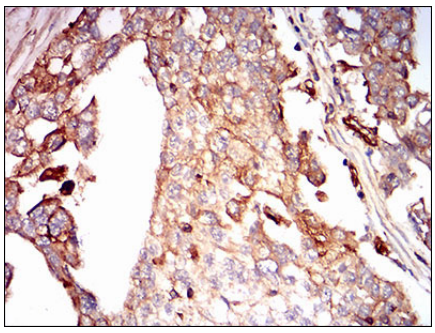

Figure 6: Immunohistochemical analysis of paraffin-embedded ovarian cancer tissues using SDC1 mouse mAb with DAB staining.