

Syndecan-4 (5G9): sc-12766

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.

CHROMOSOMAL LOCATION

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

SOURCE

Syndecan-4 (5G9) is a mouse monoclonal antibody raised against Syndecan-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Syndecan-4 (5G9) is available conjugated to agarose (sc-12766 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-12766 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12766 PE), fluorescein (sc-12766 FITC), Alexa Fluor® 488 (sc-12766 AF488), Alexa Fluor® 546 (sc-12766 AF546), Alexa Fluor® 594 (sc-12766 AF594) or Alexa Fluor® 647 (sc-12766 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-12766 AF680) or Alexa Fluor® 790 (sc-12766 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Syndecan-4 (5G9) is recommended for detection of the ectodomain 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 flow cytometry (1 µg per 1 x 10⁶ cells).

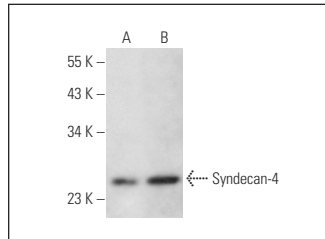
Suitable for use as control antibody for Syndecan-4 siRNA (h): sc-36588, Syndecan-4 siRNA (m): sc-36589, Syndecan-4 siRNA (r): sc-270178, Syndecan-4 shRNA Plasmid (h): sc-36588-SH, Syndecan-4 shRNA Plasmid (m): sc-36589-SH, Syndecan-4 shRNA Plasmid (r): sc-270178-SH, Syndecan-4 shRNA (h) Lentiviral Particles: sc-36588-V, Syndecan-4 shRNA (m) Lentiviral Particles: sc-36589-V and Syndecan-4 shRNA (r) Lentiviral Particles: sc-270178-V.

Molecular Weight of Syndecan-4: 24 kDa.

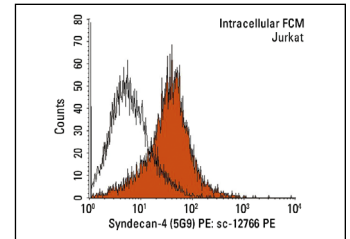
STORAGE

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

DATA



Syndecan-4 (5G9): sc-12766. Western blot analysis of Syndecan-4 expression in HeLa (A) and MDA-MB-231 (B) whole cell lysates.



Syndecan-4 (5G9) PE: sc-12766 PE. Intracellular FCM analysis of fixed and permeabilized Jurkat cells. Black line histogram represents the isotype control, normal mouse IgG_{2a} PE: sc-2867.

SELECT PRODUCT CITATIONS

- Kaneider, N.C., et al. 2002. Syndecan-4 mediates antithrombin-induced chemotaxis of human peripheral blood lymphocytes and monocytes. *J. Cell Sci.* 115: 227-236.
- Baldwin, A.K., et al. 2014. Epithelial-mesenchymal status influences how cells deposit fibrillin microfibrils. *J. Cell Sci.* 127: 158-171.
- Rønning, S.B., et al. 2015. Syndecan-4 regulates muscle differentiation and is internalized from the plasma membrane during myogenesis. *PLoS ONE* 10: e0129288.
- Nakase, I., et al. 2016. Vectorization of biomacromolecules into cells using extracellular vesicles with enhanced internalization induced by macropinocytosis. *Sci. Rep.* 6: 34937.
- Afratis, N.A., et al. 2017. IGF-IR cooperates with ERα to inhibit breast cancer cell aggressiveness by regulating the expression and localisation of ECM molecules. *Sci. Rep.* 7: 40138.
- Kudo, K., et al. 2018. Cell surface CD63 increased by up-regulated poly lactosamine modification sensitizes human melanoma cells to the BRAF inhibitor PLX4032. *FASEB J.* 33: 3851-3869.
- Bizzarro, V., et al. 2019. Mesoglycan induces keratinocyte activation by triggering Syndecan-4 pathway and the formation of the annexin A1/S100A11 complex. *J. Cell. Physiol.* 234: 20174-20192.
- Benito-Jardón, M., et al. 2020. αv-class integrin binding to Fibronectin is solely mediated by RGD and unaffected by an RGE mutation. *J. Cell Biol.* 219: e202004198.
- Feige, P., et al. 2021. Analysis of human satellite cell dynamics on cultured adult skeletal muscle myofibers. *Skelet. Muscle* 11: 1.

RESEARCH USE

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

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