BACKGROUND

NG2 (also known as melanoma-associated chondroitin sulfate proteoglycan 4, MCSP, MCSPG, MSK16 and MEL-CSPG) stabilizes cell-substratum interactions during early events of melanoma cell spreading on endothelial basement membranes. NG2 may facilitate primary melanoma progression by enhancing the activation of key signaling pathways important for tumor invasion and growth. Threonine 2256 phosphorylation of rat NG2 (Threonine 2252 phosphorylation of human NG2) leads to redistribution of NG2 on the surface of astrocytomas, polarization of the cell and a significant increase in cell motility. NG2 acts as a co-receptor for spreading and focal contact formation in association with α4/β1 Integrin in malignant melanoma cells. NG2 is present on blood vessels throughout the rat embryo. Microvessels within the rat CNS express NG2 on endothelial cells, and outside the CNS, NG2 is present on smooth muscle cells. NG2 is a novel marker for epidermal stem cells that contributes to their patterned distribution by promoting stem cell clustering.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: CSPG4 (human) mapping to 15q24.2; Cspg4 (mouse) mapping to 9 B.

RESEARCH USE

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

SOURCE

NG2 (7.1) is a mouse monoclonal antibody raised against BM stromal cells infected with SV-40 of human origin.

PRODUCT

Each vial contains 200 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NG2 (7.1) is available conjugated to either phycoerythrin (sc-53508 PE) or fluorescein (sc-53508 FITC), 200 µg/ml, for IF, IHC, and FCM.

APPLICATIONS

NG2 (7.1) is recommended for detection of NG2 of 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 NG2 siRNA (h): sc-40771, NG2 shRNA Plasmid (h): sc-40771-SH and NG2 shRNA (h) Lentiviral Particles: sc-40771-V.

Molecular Weight of NG2: 270-300 kDa.

Positive Controls: SK-MEL-28 cell lysate: sc-2236.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:50-1:500) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:50-1:500) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

See our website at www.scbt.com or our catalog for detailed protocols and support products.

See NG2 (LHM 2): sc-53389 for NG2 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.