

## NG2 (H-300): sc-20162

### 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  $\alpha 4/\beta 1$  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.

### CHROMOSOMAL LOCATION

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

### SOURCE

NG2 (H-300) is a rabbit polyclonal antibody raised against amino acids 2023-2322 mapping at the C-terminus of NG2 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

NG2 (H-300) is recommended for detection of NG2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NG2 (H-300) is also recommended for detection of NG2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for NG2 siRNA (h): sc-40771, NG2 siRNA (m): sc-40772, NG2 shRNA Plasmid (h): sc-40771-SH, NG2 shRNA Plasmid (m): sc-40772-SH, NG2 shRNA (h) Lentiviral Particles: sc-40771-V and NG2 shRNA (m) Lentiviral Particles: sc-40772-V.

Molecular Weight of NG2: 270-300 kDa.

Positive Controls: rat brain extract: sc-2392, SK-MEL-28 cell lysate: sc-2236 or rat thyroid extract: sc-2402.

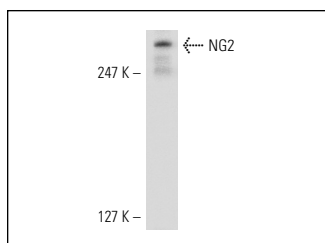
### STORAGE

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

### RESEARCH USE

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

### DATA



NG2 (H-300): sc-20162. Western blot analysis of NG2 expression in SK-MEL-28 whole cell lysate.

### SELECT PRODUCT CITATIONS

- Qian, X., et al. 2008. Pharmacologically enhanced expression of GPNMB increases the sensitivity of melanoma cells to the CR011-vcMMAE antibody-drug conjugate. *Mol. Oncol.* 2: 81-93.
- Gramann, M., et al. 2009. Prominent collagen type VI expression in juvenile angiofibromas. *Histochem. Cell Biol.* 131: 155-164.
- Boyerinas, B., et al. 2011. Let-7 modulates acquired resistance of ovarian cancer to Taxanes via IMP-1-mediated stabilization of MDR1. *Int. J. Cancer* 130: 1787-1797.
- Marinaro, C., et al. 2011. *In vivo* fate analysis reveals the multipotent and self-renewal features of embryonic AspM expressing cells. *PLoS ONE* 6: e19419.
- Kanakasabai, S., et al. 2012. PPAR $\gamma$  agonists promote oligodendrocyte differentiation of neural stem cells by modulating stemness and differentiation genes. *PLoS ONE* 7: e50500.
- Alfonso-Loeches, S., et al. 2012. Toll-like receptor 4 participates in the myelin disruptions associated with chronic alcohol abuse. *Glia* 60: 948-964.
- Butti, E., et al. 2012. Subventricular zone neural progenitors protect striatal neurons from glutamatergic excitotoxicity. *Brain* 135: 3320-3335.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **NG2 (LHM 2): sc-53389** or **NG2 (G-9): sc-166251**, our highly recommended monoclonal alternatives to NG2 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **NG2 (LHM 2): sc-53389**.