

# neogenin (G-7): sc-514872

## BACKGROUND

Neogenin (NGN) was first identified in chicken as a highly regulated protein in the developing nervous system and gastrointestinal tract. The human homolog is roughly 50% identical to the protein DCC (deleted in colorectal cancer), a candidate tumor suppressor that is also involved in neural development. DCC and neogenin may play complementary roles in the generation of the fully functional central nervous system. Neogenin is expressed in most normal tissues; in contrast to DCC, it is also detected at normal levels in cancer tissues. Neogenin is a member of the N-CAM family of cell adhesion molecules and is expressed on the surfaces of growing nerve cells as well as in a number of other developing embryonic tissues.

## REFERENCES

1. Fearon, E.R., et al. 1990. Identification of a chromosome 18q gene that is altered in colorectal cancers. *Science* 247: 49-56.
2. Vielmetter, J., et al. 1994. Neogenin, an avian cell surface protein expressed during terminal neuronal differentiation, is closely related to the human tumor suppressor molecule deleted in colorectal cancer. *J. Cell Biol.* 127: 2009-2020.
3. Hedrick, L., et al. 1994. The DCC gene product in cellular differentiation and colorectal tumorigenesis. *Genes Dev.* 8: 1174-1183.
4. Keino-Masu, K., et al. 1996. Deleted in Colorectal Cancer (DCC) encodes a netrin receptor. *Cell* 87: 175-185.
5. Gad, J.M., et al. 1997. The expression patterns of guidance receptors, DCC and neogenin, are spatially and temporally distinct throughout mouse embryogenesis. *Dev. Biol.* 192: 258-273.
6. Keeling, S.L., et al. 1997. Mouse neogenin, a DCC-like molecule, has four splice variants and is expressed widely in the adult mouse and during embryogenesis. *Oncogene* 15: 691-700.
7. Vielmetter, J., et al. 1997. Molecular characterization of human neogenin, a DCC-related protein, and the mapping of its gene (NEO1) to chromosomal position 15q22.3-q23. *Genomics* 41: 414-421.

## CHROMOSOMAL LOCATION

Genetic locus: NEO1 (human) mapping to 15q24.1; Neo1 (mouse) mapping to 9 B.

## SOURCE

neogenin (G-7) is a mouse monoclonal antibody raised against amino acids 1171-1345 mapping near the C-terminus of neogenin of human origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

neogenin (G-7) is available conjugated to fluorescein (sc-514872 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

neogenin (G-7) is recommended for detection of neogenin of mouse and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for neogenin siRNA (h): sc-36028, neogenin siRNA (m): sc-36029, neogenin shRNA Plasmid (h): sc-36028-SH, neogenin shRNA Plasmid (m): sc-36029-SH, neogenin shRNA (h) Lentiviral Particles: sc-36028-V and neogenin shRNA (m) Lentiviral Particles: sc-36029-V.

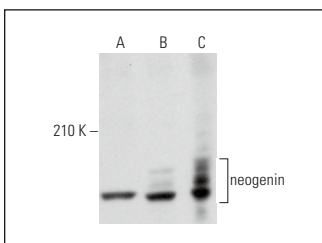
Molecular Weight of neogenin: 160 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, Neuro-2A whole cell lysate: sc-364185 or A549 cell lysate: sc-2413.

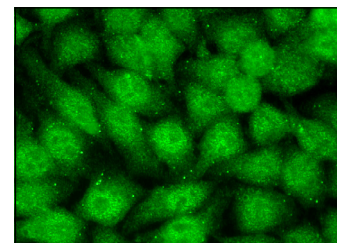
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



neogenin (G-7): sc-514872. Western blot analysis of neogenin expression in A549 (A), U-251-MG (B) and Neuro-2A (C) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



neogenin (G-7): sc-514872. Immunofluorescence staining of formalin-fixed HeLa cells showing membrane and nuclear localization.

## SELECT PRODUCT CITATIONS

1. Guaiquil, V.H., et al. 2022. Expression of axon guidance ligands and their receptors in the cornea and trigeminal ganglia and their recovery after corneal epithelium injury. *Exp. Eye Res.* 219: 109054.

## 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.