

Neurogenin 1 (OR-7): sc-100332

BACKGROUND

The Neurogenin family of proteins belongs to the basic helix-loop-helix (bHLH) superfamily and consists of Neurogenin 1, Neurogenin 2 and Neurogenin 3 (also designated ngn3). bHLH members are transcriptional regulators that determine cell fate. During mouse neurogenesis, Neurogenin 1 and Neurogenin 2 are expressed in distinct progenitor populations in the central and peripheral nervous systems. Targeted mutation analyses have shown that Neurogenin 1 is essential for the determination of neuronal precursors for proximal cranial sensory ganglia and that Neurogenin 2 is essential for the determination of precursors for epibranchial placode-derived sensory neurons. The gene which encodes Neurogenin 1 maps to human chromosome 5q31.1.

REFERENCES

1. Ma, Q., et al. 1998. Neurogenin 1 is essential for the determination of neuronal precursors for proximal cranial sensory ganglia. *Neuron* 20: 469-482.
2. Fode, C., et al. 1998. The bHLH protein Neurogenin 2 is a determination factor for epibranchial placode-derived sensory neurons. *Neuron* 20: 483-494.
3. Gradwohl, G., et al. 2000. Neurogenin 3 is required for the development of the four endocrine cell lineages of the pancreas. *Proc. Natl. Acad. Sci. USA* 97: 1607-1611.
4. Schwitzgebel, V.M., et al. 2000. Expression of Neurogenin 3 reveals an islet cell precursor population in the pancreas. *Development* 127: 3533-3542.
5. Jensen, J., et al. 2000. Independent development of pancreatic α and β cells from Neurogenin 3-expressing precursors: a role for the notch pathway in repression of premature differentiation. *Diabetes* 49: 163-176.
6. Huang, H.P., et al. 2000. Regulation of the pancreatic islet-specific gene BETA2 (neuroD) by Neurogenin 3. *Mol. Cell. Biol.* 20: 3292-3307.
7. Jacquemin, P., et al. 2000. Transcription factor hepatocyte nuclear factor 6 regulates pancreatic endocrine cell differentiation and controls expression of the proendocrine gene ngn3. *Mol. Cell. Biol.* 20: 4445-4454.
8. LocusLink Report (LocusID: 11922). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: NEUROG1 (human) mapping to 5q31.1; Neurog1 (mouse) mapping to 13 B1.

SOURCE

Neurogenin 1 (OR-7) is a mouse monoclonal antibody raised against recombinant Neurogenin 1 of human origin.

PRODUCT

Each vial contains 50 μ g IgG_{2a} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Neurogenin 1 (OR-7) is recommended for detection of Neurogenin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for Neurogenin 1 siRNA (h): sc-106790, Neurogenin 1 siRNA (m): sc-42076, Neurogenin 1 shRNA Plasmid (h): sc-106790-SH, Neurogenin 1 shRNA Plasmid (m): sc-42076-SH, Neurogenin 1 shRNA (h) Lentiviral Particles: sc-106790-V and Neurogenin 1 shRNA (m) Lentiviral Particles: sc-42076-V.

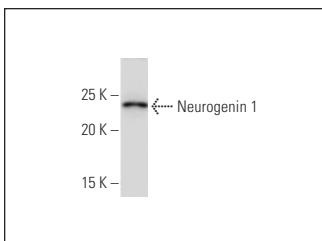
Molecular Weight of Neurogenin 1: 26 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

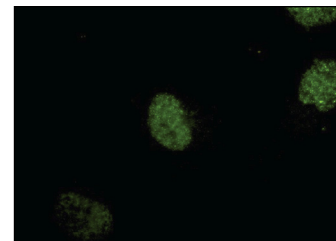
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Neurogenin 1 (OR-7): sc-100332. Western blot analysis of Neurogenin 1 expression in HeLa nuclear extract.



Neurogenin 1 (OR-7): sc-100332. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Shou, J.W., et al. 2019. Berberine protects C17.2 neural stem cells from oxidative damage followed by inducing neuronal differentiation. *Front. Cell. Neurosci.* 13: 395.

STORAGE

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