

Neuron navigator 2 (S-15): sc-168744

BACKGROUND

Neuron navigator 2 (NAV2), also known as RAINB1 (retinoic acid inducible in neuroblastoma 1), POMFIL2 (pore membrane and/or filament-interacting-like protein 2), HELAD1 (helicase APC down-regulated 1), unc53H2 or steerin-2, is a 2,488 amino acid nuclear protein that plays a role in the development of sensory organs. Existing as thirteen alternatively spliced isoforms, Neuron navigator 2 displays 3' to 5' helicase activity and exonuclease activity and participates in the catalysis of ATP to ADP. Neuron navigator 2 is highly expressed in the nervous system of developing embryos and colon carcinomas, as well as in liver, brain and kidney. Lower levels of expression are found in lung, thyroid, spinal cord, heart, placenta and mammary gland. Neuron navigator 2 belongs to the Nav/unc-53 family and contains one CH (calponin-homology) domain.

REFERENCES

- Coy, J.F., et al. 2002. Pore membrane and/or filament interacting like protein 1 (POMFIL1) is predominantly expressed in the nervous system and encodes different protein isoforms. *Gene* 290: 73-94.
- Maes, T., et al. 2002. Neuron navigator: a human gene family with homology to unc-53, a cell guidance gene from *Caenorhabditis elegans*. *Genomics* 80: 21-30.
- Ishiguro, H., et al. 2002. Isolation of HELAD1, a novel human helicase gene up-regulated in colorectal carcinomas. *Oncogene* 21: 6387-6394.
- Merrill, R.A., et al. 2002. A mammalian homolog of unc-53 is regulated by all-trans retinoic acid in neuroblastoma cells and embryos. *Proc. Natl. Acad. Sci. USA* 99: 3422-3427.
- Tsutsumi, S., et al. 2004. The novel gene encoding a putative transmembrane protein is mutated in gnathodiaphyseal dysplasia (GDD). *Am. J. Hum. Genet.* 74: 1255-1261.
- Peeters, P.J., et al. 2004. Sensory deficits in mice hypomorphic for a mammalian homolog of unc-53. *Brain Res. Dev. Brain Res.* 150: 89-101.
- Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607026. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NAV2 (human) mapping to 11p15.1; Nav2 (mouse) mapping to 7 B4.

SOURCE

Neuron navigator 2 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Neuron navigator 2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-168744 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Neuron navigator 2 (S-15) is recommended for detection of Neuron navigator 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with Neuron navigator 1 or Neuron navigator 3.

Neuron navigator 2 (S-15) is also recommended for detection of Neuron navigator 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Neuron navigator 2 siRNA (h): sc-96275, Neuron navigator 2 siRNA (m): sc-149935, Neuron navigator 2 shRNA Plasmid (h): sc-96275-SH, Neuron navigator 2 shRNA Plasmid (m): sc-149935-SH, Neuron navigator 2 shRNA (h) Lentiviral Particles: sc-96275-V and Neuron navigator 2 shRNA (m) Lentiviral Particles: sc-149935-V.

Molecular Weight of Neuron navigator 2 isoform: 261 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) 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.

RESEARCH USE

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

PROTOCOLS

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