

Nova-1 (C-17): sc-10543

BACKGROUND

Nova-1 and Nova-2 are members of a superfamily of protein regulators of RNA metabolism in neurons. Both are nuclear RNA binding proteins with K homology motifs, conserved protein sequences which bind to RNA. Nova proteins, normally sequestered in the central nervous system, are expressed by systemic tumors in patients with the autoimmune disorder paraneoplastic opsoclonus-myoclonus ataxia (POMA). Nova-1 is expressed in the hindbrain and ventral spinal cord and Nova-2 is expressed in the neocortex and hippocampus. Nova-1 is necessary for regulating neuron-specific alternative splicing of the glycine receptor $\alpha 2$ pre-mRNA.

REFERENCES

1. Burd, C.G. and Dreyfuss, G. 1994. Conserved structures and diversity of functions of RNA-binding proteins. *Science* 265: 615-621.
2. Darnell, R.B. 1996. Onconeural antigens and the paraneoplastic neurologic disorders: at the intersection of cancer, immunity, and the brain. *Proc. Natl. Acad. Sci. USA* 93: 4529-4536.
3. Yang, Y.Y., Yin, G.L. and Darnell, R.B. 1998. The neuronal RNA-binding protein Nova-2 is implicated as the autoantigen targeted in POMA patients with dementia. *Proc. Natl. Acad. Sci. USA* 95: 13254-13259.
4. Lewis, H.A., Chen, H., Edo, C., Buckanovich, R.J., Yang, Y.Y., Musunuru, K., Zhong, R., Darnell, R.B. and Burley, S.K. 1999. Crystal structures of Nova-1 and Nova-2 K-homology RNA-binding domains. *Structure* 7: 191-203.
5. Jensen, K.B., Dredge, B.K., Stefani, G., Zhong, R., Buckanovich, R.J., Okano, H.J., Yang, Y.Y.L. and Darnell, R.B. 2000. Nova-1 regulates neuron-specific alternative splicing and is essential for neuronal variability. *Neuron* 25: 359-371.

CHROMOSOMAL LOCATION

Genetic locus: NOVA1 (human) mapping to 14q12; Nova1 (mouse) mapping to 12 B3.

SOURCE

Nova-1 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Nova-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-10543 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Nova-1 (C-17) is recommended for detection of Nova-1 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).

Nova-1 (C-17) is also recommended for detection of Nova-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Nova-1 siRNA (h): sc-42142, Nova-1 siRNA (m): sc-42143, Nova-1 shRNA Plasmid (h): sc-42142-SH, Nova-1 shRNA Plasmid (m): sc-42143-SH, Nova-1 shRNA (h) Lentiviral Particles: sc-42142-V and Nova-1 shRNA (m) Lentiviral Particles: sc-42143-V.

Molecular Weight of Nova-1: 50-55 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

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.

PROTOCOLS

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



Try **Nova-1 (512Y): sc-100334**, our highly recommended monoclonal alternative to Nova-1 (C-17).