

periaxin (N-14): sc-240773

BACKGROUND

Periaxin, also known as PRX, is a 1,461 amino acid protein that contains one PDZ (DHR) domain and belongs to the periaxin family. Periaxin encodes two PDZ-domain proteins, L- and S-periaxin, which are required for peripheral nerve myelin sheath maintenance. Periaxin may play a role in axon-glia interactions, possibly by interacting with cytoplasmic domains of integral membrane proteins in periaxonal regions of Schwann cell plasma membranes. Defects in periaxin are linked to Dejerine-Sottas syndrome, which is characterized by motor and sensory neuropathy with very slow nerve conduction velocities, increased cerebrospinal fluid protein concentrations, hypertrophic nerve changes, delayed age of walking and areflexia. Mutations in periaxin are also linked to CMT4F, an autosomal recessive form of Charcot-Marie-Tooth disease. The gene that encodes periaxin maps to human chromosome 19q13.2.

REFERENCES

1. Scherer, S.S., et al. 1995. Periaxin expression in myelinating Schwann cells: modulation by axon-glia interactions and polarized localization during development. *Development* 121: 4265-4273.
2. Gillespie, C.S., et al. 1997. The gene encoding the Schwann cell protein periaxin localizes on mouse chromosome 7 (Prx). *Genomics* 41: 297-298.
3. Dytrych, L., et al. 1998. Two PDZ domain proteins encoded by the murine periaxin gene are the result of alternative intron retention and are differentially targeted in Schwann cells. *J. Biol. Chem.* 273: 5794-5800.
4. Gillespie, C.S., et al. 2000. Peripheral demyelination and neuropathic pain behavior in periaxin-deficient mice. *Neuron* 26: 523-531.
5. Boerkoel, C.F., et al. 2001. Periaxin mutations cause recessive Dejerine-Sottas neuropathy. *Am. J. Hum. Genet.* 68: 325-333.
6. Guilbot, A., et al. 2001. A mutation in periaxin is responsible for CMT4F, an autosomal recessive form of Charcot-Marie-Tooth disease. *Hum. Mol. Genet.* 10: 415-421.
7. Takashima, H., et al. 2002. Periaxin mutations cause a broad spectrum of demyelinating neuropathies. *Ann. Neurol.* 51: 709-715.
8. Kijima, K., et al. 2004. Periaxin mutation causes early-onset but slow-progressive Charcot-Marie-Tooth disease. *J. Hum. Genet.* 49: 376-379.
9. Kabzinska, D., et al. 2006. Charcot-Marie-Tooth type 4F disease caused by S399fsx410 mutation in the PRX gene. *Neurology* 66: 745-747.

CHROMOSOMAL LOCATION

Genetic locus: PRX (human) mapping to 19q13.2; Prx (mouse) mapping to 7 A3.

SOURCE

periaxin (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of periaxin of human origin.

RESEARCH USE

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

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-240773 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

periaxin (N-14) is recommended for detection of periaxin, including L-periaxin and S-periaxin 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).

Suitable for use as control antibody for periaxin siRNA (h): sc-97670, periaxin siRNA (m): sc-152167, periaxin shRNA Plasmid (h): sc-97670-SH, periaxin shRNA Plasmid (m): sc-152167-SH, periaxin shRNA (h) Lentiviral Particles: sc-97670-V and periaxin shRNA (m) Lentiviral Particles: sc-152167-V.

Molecular Weight of periaxin isoforms: 155/16/148 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.

PROTOCOLS

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



Try **periaxin (G-5): sc-515672**, our highly recommended monoclonal alternative to periaxin (N-14).