

Puratrophin 1 (D-14): sc-160694

BACKGROUND

Puratrophin 1, also known as PLEKHG4 (pleckstrin homology domain containing, family G (with RhoGef domain) member 4), is a 1,191 amino acid protein that contains one DH (DBL-homology) domain and one PH domain. The Puratrophin 1 protein contains multiple domains, such as a pleckstrin-like homology domain, cellular retinaldehyde-binding/triple function domain, a spectrin repeat domain, and a guanine-nucleotide exchange factor domain, suggesting a role in intracellular signaling and cytoskeleton dynamics at the Golgi apparatus. Most strongly expressed in testis and pancreas, the Puratrophin 1 protein is expressed in kidney, Leydig cells in the testis, epithelial cells in the prostate gland and Langerhans islet in the pancreas. Existing as three alternatively spliced isoforms, the Puratrophin 1 gene is conserved in dog, cow, mouse and rat, and maps to human chromosome 16q22.1. Mutations in the Puratrophin 1 gene are associated with spinocerebellar ataxia 16q22-linked.

REFERENCES

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3. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. *Cell* 125: 801-814.
4. Wiczorek, S., et al. 2006. Mutations of the puratrophin-1 (PLEKHG4) gene on chromosome 16q22.1 are not a common genetic cause of cerebellar ataxia in a European population. *J. Hum. Genet.* 51: 363-367.
5. Ohata, T., et al. 2006. A -16C>T substitution in the 5' UTR of the puratrophin-1 gene is prevalent in autosomal dominant cerebellar ataxia in Nagano. *J. Hum. Genet.* 51: 461-466.
6. Ouyang, Y., et al. 2006. 16q-linked autosomal dominant cerebellar ataxia: a clinical and genetic study. *J. Neurol. Sci.* 247: 180-186.
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CHROMOSOMAL LOCATION

Genetic locus: PLEKHG4 (human) mapping to 16q22.1; Plekhg4 (mouse) mapping to 8 D3.

SOURCE

Puratrophin 1 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Puratrophin 1 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-160694 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Puratrophin 1 (D-14) is recommended for detection of Puratrophin 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).

Puratrophin 1 (D-14) is also recommended for detection of Puratrophin 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Puratrophin 1 siRNA (h): sc-93522, Puratrophin 1 siRNA (m): sc-152592, Puratrophin 1 shRNA Plasmid (h): sc-93522-SH, Puratrophin 1 shRNA Plasmid (m): sc-152592-SH, Puratrophin 1 shRNA (h) Lentiviral Particles: sc-93522-V and Puratrophin 1 shRNA (m) Lentiviral Particles: sc-152592-V.

Molecular Weight of Puratrophin 1 isoforms: 131/123/20 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.