

SCA11 (S-17): sc-165430

BACKGROUND

SCA11 (spinocerebellar ataxia 11), also known as TTBK2 (tau-tubulin kinase 2), is a 1,244 amino acid protein that belongs to the protein kinase superfamily and the CK1 Ser/Thr protein kinase family. The SCA11 gene, comprising of 16 exons, produces a 5.6-kb transcript in which the longest open reading frame is 3,732 nucleotides. Defects in the SCA11 protein are the cause of the disorder spinocerebellar ataxia type 11 (SCA11). Spinocerebellar ataxia is a clinically and genetically heterogeneous group of cerebellar disorders. Patients show progressive incoordination of gait and often poor coordination of hands, speech and eye movements, due to degeneration of the cerebellum with variable involvement of the brainstem and spinal cord. The SCA11 disorder is an autosomal dominant cerebellar ataxia (ADCA). It is a relatively benign, late-onset, slowly progressive neurologic disorder. The SCA11 protein has also been implicated in Alzheimer disease and in tangle formation. Existing as three alternatively spliced isoforms, the SCA11 gene is conserved in chimpanzee, dog, cow, mouse, rat, chicken and zebrafish, and maps to human chromosome 15q15.2.

REFERENCES

1. Worth, P.F., et al. 1999. Autosomal dominant cerebellar ataxia type III: linkage in a large British family to a 7.6-cM region on chromosome 15q14-21.3. *Am. J. Hum. Genet.* 65: 420-426.
2. Sato, S., et al. 2006. Tau-tubulin kinase 1 (TTBK1), a neuron-specific tau kinase candidate, is involved in tau phosphorylation and aggregation. *J. Neurochem.* 98: 1573-1584.
3. Houlden, H., et al. 2007. Mutations in TTBK2, encoding a kinase implicated in tau phosphorylation, segregate with spinocerebellar ataxia type 11. *Nat. Genet.* 39: 1434-1436.

CHROMOSOMAL LOCATION

Genetic locus: TTBK2 (human) mapping to 15q15.2; Ttbk2 (mouse) mapping to 2 E5.

SOURCE

SCA11 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SCA11 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-165430 P, (100 µg 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

SCA11 (S-17) is recommended for detection of SCA11 of human origin and TTBK2 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

SCA11 (S-17) is also recommended for detection of SCA11 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SCA11 siRNA (h): sc-90020, TTBK2 siRNA (m): sc-154748, SCA11 shRNA Plasmid (h): sc-90020-SH, TTBK2 shRNA Plasmid (m): sc-154748-SH, SCA11 shRNA (h) Lentiviral Particles: sc-90020-V and TTBK2 shRNA (m) Lentiviral Particles: sc-154748-V.

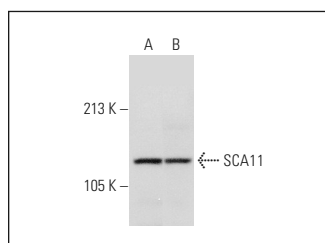
Molecular Weight of SCA11 isoforms 1/2/3: 137/129/54 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

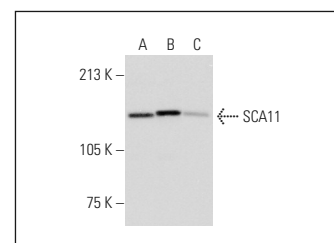
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



SCA11 (S-17): sc-165430. Western blot analysis of SCA11 expression in K-562 (A) and HEK293 (B) whole cell lysates.



SCA11 (S-17): sc-165430. Western blot analysis of SCA11 expression in HeLa (A), Jurkat (B) and NIH/3T3 (C) whole cell lysates.

PROTOCOLS

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