

Caytaxin (D-20): sc-65018

BACKGROUND

Caytaxin, also known as ATCAY (ataxia cayman type protein), CLAC or BNIP-H, is a 371 amino acid neuron-restricted protein that exists as 3 alternatively spliced isoforms. Deficiency or mutation of the gene encoding Caytaxin is associated with Cayman ataxia, a recessive congenital ataxia specific to a restricted population on Grand Cayman Island. Symptoms of Cayman ataxia include hypotonia, psychomotor retardation and cerebellar dysfunction, including wide-based ataxic gait, nystagmus, intention tremor and dysarthria. Co-localizing to mitochondria, Caytaxin binds UKHC and contains one CRAL-TRIO domain that is used to interact with small lipophilic molecules. As an adaptor protein, Caytaxin regulates transport of mitochondria, and, as observed in RNA interference studies, suppression of Caytaxin leads to mitochondrial redistribution in neurites.

REFERENCES

1. Kapfhamer, D., et al. 1996. The neurological mouse mutations jittery and hesitant are allelic and map to the region of mouse chromosome 10 homologous to 19p13.3. *Genomics* 35: 533-538.
2. Nystuen, A., et al. 1996. A cerebellar ataxia locus identified by DNA pooling to search for linkage disequilibrium in an isolated population from the Cayman Islands. *Hum. Mol. Genet.* 5: 525-531.
3. Bomar, J.M., et al. 2003. Mutations in a novel gene encoding a CRAL-TRIO domain cause human Cayman ataxia and ataxia/dystonia in the jittery mouse. *Nat. Genet.* 35: 264-269.
4. Gilbert, N., et al. 2004. Characterization of a mutagenic B1 retrotransposon insertion in the jittery mouse. *Hum. Mutat.* 24: 9-13.
5. Xiao, J., et al. 2005. Caytaxin deficiency causes generalized dystonia in rats. *Brain Res. Mol. Brain Res.* 141: 181-192.
6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 608179. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: ATCAY (human) mapping to 19p13.3; Atcay (mouse) mapping to 10 C1.

SOURCE

Caytaxin (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Caytaxin 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-65018 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Caytaxin (D-20) is recommended for detection of Caytaxin of mouse, rat and human 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).

Caytaxin (D-20) is also recommended for detection of Caytaxin in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Caytaxin siRNA (h): sc-62082, Caytaxin siRNA (m): sc-62083, Caytaxin shRNA Plasmid (h): sc-62082-SH, Caytaxin shRNA Plasmid (m): sc-62083-SH, Caytaxin shRNA (h) Lentiviral Particles: sc-62082-V and Caytaxin shRNA (m) Lentiviral Particles: sc-62083-V.

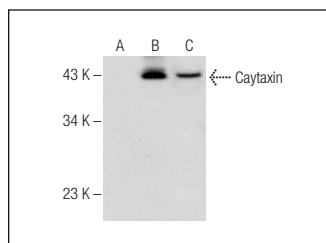
Molecular Weight of Caytaxin: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-87 MG cell lysate: sc-2411 or Caytaxin (m): 293T Lysate: sc-119044.

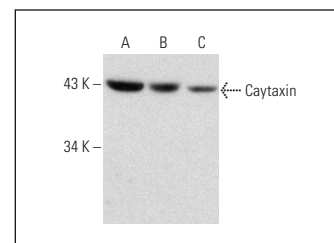
RECOMMENDED SECONDARY REAGENTS

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



Caytaxin (D-20): sc-65018. Western blot analysis of Caytaxin expression in non-transfected 293T: sc-117752 (A), mouse Caytaxin transfected 293T: sc-119044 (B) and Hep G2 (C) whole cell lysates.



Caytaxin (D-20): sc-65018. Western blot analysis of Caytaxin expression in HeLa (A), U-87 MG (B) and IMR-32 (C) whole cell lysates.

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.