

TorsinA (S-20): sc-19483

BACKGROUND

A mutation of the DYT1 gene, which codes for TorsinA, has been identified as the cause of one form of autosomal dominantly inherited dystonia. Early-onset torsion dystonia is a movement disorder, characterized by twisting muscle contractures, that begins in childhood. Symptoms are believed to result from altered neuronal communication in the basal ganglia. TorsinA comprises 332 amino acids. TorsinA is widely expressed throughout the mouse central nervous system and is detected in the majority of neurons in nearly all regions. The proteins display cytoplasmic distribution, although in some types of neurons localization is perinuclear. TorsinA often performs chaperone-like functions that assist in the assembly, operation, or disassembly of protein complexes. The gene which encodes TorsinA has high homology to three additional mammalian genes and a nematode gene and distal similarity to the family of heat-shock proteins and the Clp protease family. The gene which encodes TorsinA maps to human chromosome 9q34.11.

REFERENCES

- Ozelius, L.J., et al. 1997. The early-onset torsion dystonia gene (DYT1) encodes an ATP-binding protein. *Nat. Genet.* 17: 40-48.
- Neuwald, A.F., et al. 1999. AAA⁺: A class of chaperone-like ATPases associated with the assembly, operation, and disassembly of protein complexes. *Genome Res.* 9: 27-43.
- Konakova, M. and Pulst, S.M. 2001. Immunocytochemical characterization of torsin proteins in mouse brain. *Brain Res.* 922: 1-8.

CHROMOSOMAL LOCATION

Genetic locus: TOR1A (human) mapping to 9q34.11.

SOURCE

TorsinA (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TorsinA 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-19483 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.

PROTOCOLS

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

APPLICATIONS

TorsinA (S-20) is recommended for detection of TorsinA of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TorsinA (S-20) is also recommended for detection of TorsinA in additional species, including equine and bovine.

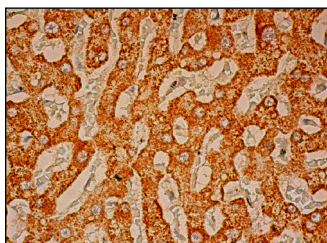
Suitable for use as control antibody for TorsinA siRNA (h): sc-42303, TorsinA shRNA Plasmid (h): sc-42303-SH and TorsinA shRNA (h) Lentiviral Particles: sc-42303-V.

Molecular Weight of glycosylated TorsinA: 38 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



TorsinA (S-20): sc-19483. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

SELECT PRODUCT CITATIONS

- Yokoi, F., et al. 2008. Motor deficits and hyperactivity in cerebral cortex-specific Dyt1 conditional knockout mice. *J. Biochem.* 143: 39-47.

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Try **TorsinA (D-7): sc-373915**, our highly recommended monoclonal alternative to TorsinA (S-20).