

# TorsinA (H-85): sc-33606

## 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., Hewett, J.W., Page, C.E., Bressman, S.B., Kramer, P.L., Shalish, C., de Leon, D., Brin, M.F., Raymond, D., Corey, D.P., Fahn, S., Risch, N.J., Buckler, A.J., Gusella, J.F. and Breakefield, X.O. 1997. The early-onset Torsion dystonia gene (DYT1) encodes an ATP-binding protein. *Nat. Genet.* 17: 40-48.
- Neuwald, A.F., Aravind, L., Spouge, J.L. and Koonin, E.V. 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.
- Walker, R.H., Brin, M.F., Sandu, D., Good, P.F. and Shashidharan, P. 2002. TorsinA immunoreactivity in brains of patients with DYT1 and non-DYT1 dystonia. *Neurology* 58: 120-124.
- LocusLink Report (LocusID: 605204). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: TOR1A/TOR1B (human) mapping to 9q34.11; Tor1a/Tor1b (mouse) mapping to 2 B.

## SOURCE

TorsinA (H-85) is a rabbit polyclonal antibody raised against amino acids 176-260 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.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

TorsinA (H-85) is recommended for detection of TorsinA and, to a lesser extent, TorsinB 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).

TorsinA (H-85) is also recommended for detection of TorsinA and, to a lesser extent, TorsinB in additional species, including equine, canine, bovine and porcine.

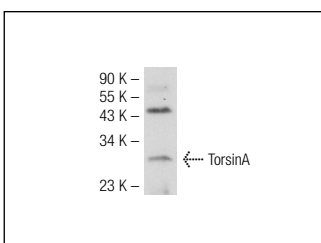
Molecular Weight of glycosylated TorsinA: 38 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



TorsinA (H-85): sc-33606. Western blot analysis of TorsinA expression in NIH/3T3 whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **TorsinA (D-7): sc-373915**, our highly recommended monoclonal alternative to TorsinA (H-85).