

Torsin3A (S-14): sc-131812

BACKGROUND

Torsin3A (TOR3A), also known as ATP-dependent interferon-responsive protein (ADIR), is a 397 amino acid member of the clpA/clpB family of proteins. Localized to the cytoplasm and the endoplasmic reticulum, Torsin3A is most highly expressed in stomach, lymph nodes and salivary glands. Torsin3A contains a hydrophobic N-terminal sequence, an ATP binding domain and eight putative phosphorylation sites. Highly homologous with TorsinA and TorsinB, Torsin3A is thought to be related to the AAA chaperone-like family of ATPases. Members of this family play a role in the assembly, disassembly and operation of a variety of protein complexes, confer increased tolerance to high temperature and promote specific proteolysis. Torsin3A is also referred to as an interferon responsive gene, as interaction with type 1 interferons (IFN- α and IFN- β) cause a 5- to 40-fold increase in Torsin3A mRNA levels. Three isoforms of Torsin3A exist as a result of alternative splicing events, and isoform 2 is expressed exclusively in the placenta.

REFERENCES

1. Augood, S.J., et al. 1999. Distribution of the mRNAs encoding TorsinA and TorsinB in the normal adult human brain. *Ann. Neurol.* 46: 761-769.
2. Dron, M., et al. 2002. Molecular cloning of ADIR, a novel interferon responsive gene encoding a protein related to the torsins. *Genomics* 79: 315-325.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607555. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Oberlin, S.R., et al. 2004. Development and anatomic localization of TorsinA. *Adv. Neurol.* 94: 61-65.
5. Muraro, N.I. and Moffat, K.G. 2006. Downregulation of torp4a, encoding the *Drosophila* homologue of TorsinA, results in increased neuronal degeneration. *J. Neurobiol.* 66: 1338-1353.
6. Snider, J. and Houry, W.A. 2006. MoxR AAA⁺ ATPases: a novel family of molecular chaperones? *J. Struct. Biol.* 156: 200-209.

CHROMOSOMAL LOCATION

Genetic locus: TOR3A (human) mapping to 1q25.2.

SOURCE

Torsin3A (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Torsin3A of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131812 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Torsin3A (S-14) is recommended for detection of Torsin3A isoforms 1, 2 and 3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for Torsin3A siRNA (h): sc-88800, Torsin3A shRNA Plasmid (h): sc-88800-SH and Torsin3A shRNA (h) Lentiviral Particles: sc-88800-V.

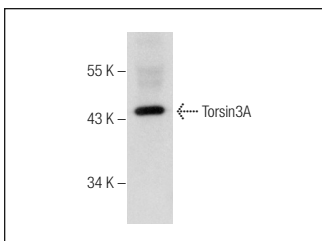
Molecular Weight of Torsin3A: 46 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411 or human salivary gland extract: sc-363762.

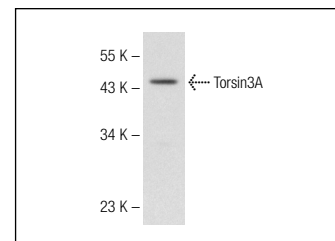
RECOMMENDED SECONDARY REAGENTS

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



Torsin3A (S-14): sc-131812. Western blot analysis of Torsin3A expression in human salivary gland tissue extract.



Torsin3A (S-14): sc-131812. Western blot analysis of Torsin3A expression in U-87 MG whole cell lysate.

RESEARCH USE

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

MONOS
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Try **Torsin3A (D-9): sc-398045**, our highly recommended monoclonal alternative to Torsin3A (S-14).