

# Torsin3A (D-9): sc-398045

## 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- $\alpha$  and IFN- $\beta$ ) 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/>

## CHROMOSOMAL LOCATION

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

## SOURCE

Torsin3A (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 207-234 within an internal region of Torsin3A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Torsin3A (D-9) is available conjugated to agarose (sc-398045 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398045 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398045 PE), fluorescein (sc-398045 FITC), Alexa Fluor® 488 (sc-398045 AF488), Alexa Fluor® 546 (sc-398045 AF546), Alexa Fluor® 594 (sc-398045 AF594) or Alexa Fluor® 647 (sc-398045 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398045 AF680) or Alexa Fluor® 790 (sc-398045 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398045 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

Torsin3A (D-9) is recommended for detection of Torsin3A isoforms 1, 2 and 3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

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.

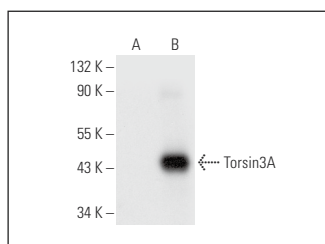
Positive Controls: Torsin3A (h): 293T Lysate: sc-371470.

## RECOMMENDED SUPPORT REAGENTS

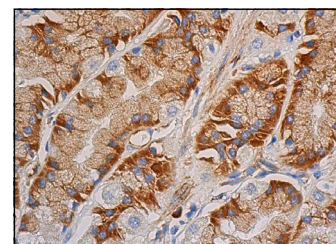
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Torsin3A (D-9): sc-398045. Western blot analysis of Torsin3A expression in non-transfected: sc-117752 (A) and human Torsin3A transfected: sc-371470 (B) 293T whole cell lysates.



Torsin3A (D-9): sc-398045. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

## 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.