SANTA CRUZ BIOTECHNOLOGY, INC.

THP (m): 293T Lysate: sc-127653

BACKGROUND

Tamm-Horsfall glycoprotein (also referred to as uromodulin or THP) is the most abundant protein found in normal urine. THP is expressed on the luminal surface of the membrane with the glycosyl phosphatidylinositol (GPI) anchor and excreted in urine at a rate of 50-100 mg per day. THP, uropontin and nephrocalcin are the three known urinary glycoproteins that affect the formation of calcium-containing kidney stones. THP is synthesized by kidney epithelial cells and is believed to play important and diverse roles in the urinary system, including renal water balance, immunosuppression, urinary stone formation and inhibition of bacterial adhesion. THP is nontoxic and blocks early events required for normal T-cell proliferation *in vitro*. The gene which encodes THP and is a candidate gene for nephrolithiasis maps to human chromosome 16p12.3.

REFERENCES

1. Tamm, I. and Horsfall, F.L., Jr. 1952. A mucoprotein derived from human urine which reacts with influenza, mumps, and Newcastle disease viruses. J. Exp. Med. 95: 71-97.
2. Muchmore, A.V. and Decker, J.M. 1985. Uromodulin: a unique 85-kilodalton immunosuppressive glycoprotein isolated from urine of pregnant women. Science 229: 479-481.
3. Fukuoka, S. and Kobayashi, K. 2001. Analysis of the C-terminal structure of urinary Tamm-Horsfall protein reveals that the release of the glycosyl phosphatidylinositol-anchored counterpart from the kidney occurs by phenylalanine-specific proteolysis. Biochem. Biophys. Res. Commun. 289: 1044-1048.
4. Zhu, X., Cheng, J., Gao, J., Lepor, H., Zhang, Z.T., Pak, J. and Wu, X.R. 2002. Isolation of mouse THP gene promoter and demonstration of its kidney-specific activity in transgenic mice. Am. J. Physiol. Renal Physiol. 282: 608-617.
5. Pook, M.A., Jeremiah, S., Scheinman, S.J., Povey, S. and Thakker, R.V. 1993. Localization of the Tamm-Horsfall glycoprotein (uromodulin) gene to chromosome 16p12.3-16p13.11. Ann. Hum. Genet. 57: 285-290.
6. Jeanpierre, C., Whitmore, S.A., Austruy, E., Cohen-Salmon, M., Callen, D.F. and Junien, C. 1993. Chromosomal assignment of the uromodulin gene (UMOD) to 16p13.11. Cytogenet. Cell Genet. 62: 185-187.
7. LocusLink Report (LocusID: 191845). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Umod (mouse) mapping to 7 F2.

PRODUCT

THP (m): 293T Lysate represents a lysate of mouse THP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

THP (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive THP antibodies. Recommended use: 10-20 µl per lane.

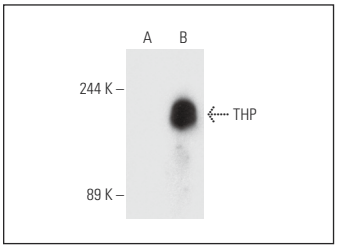
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

THP (B-5): sc-271023 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse THP expression in THP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

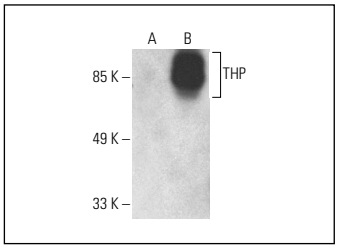
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



THP (B-5): sc-271023. Western blot analysis of THP expression in non-transfected: sc-117752 (**A**) and mouse THP transfected: sc-127653 (**B**) 293T whole cell lysates.



THP (B-2) HRP: sc-271022 HRP. Direct western blot analysis of THP expression in non-transfected: sc-117752 (**A**) and mouse THP transfected: sc-127653 (**B**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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