SANTA CRUZ BIOTECHNOLOGY, INC.

THP (G-20): sc-19554

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 is a candidate gene for nephrolithiasis and maps to human chromosome 16p12.3.

CHROMOSOMAL LOCATION

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

SOURCE

THP (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of THP of mouse 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-19554 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.

APPLICATIONS

THP (G-20) is recommended for detection of Tamm-Horsfall Protein (THP) of mouse and rat 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), 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).

THP (G-20) is also recommended for detection of Tamm-Horsfall Protein (THP) in additional species, including bovine.

Suitable for use as control antibody for THP siRNA (m): sc-41065, THP shRNA Plasmid (m): sc-41065-SH and THP shRNA (m) Lentiviral Particles: sc-41065-V.

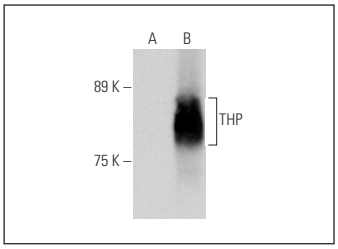
Molecular Weight of THP: 85 kDa.

Positive Controls: THP (m): 293T Lysate: sc-127653.

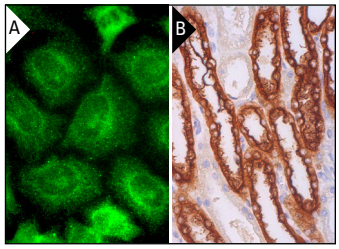
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



THP (G-20): sc-19554. Western blot analysis of THP expression in non-transfected: sc-117752 (**A**) and mouse THP transfected: sc-127653 (**B**) 293T whole cell lysates.



THP (G-20): sc-19554. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Lee, P.T., et al. 2010. Mouse kidney progenitor cells accelerate renal regeneration and prolong survival after ischemic injury. Stem Cells 28: 573-584.
2. Stein, C.S., et al. 2010. Osmoregulation of ceroid neuronal lipofuscinosis type 3 in the renal medulla. Am. J. Physiol., Cell Physiol. 298: C1388-C1400.
3. Leeuwis, J.W., et al. 2011. Direct visualization of Smad1/5/8-mediated transcriptional activity identifies podocytes and collecting ducts as major targets of BMP signalling in healthy and diseased kidneys. J. Pathol. 224: 121-132.
4. Zharikov, A.Y., et al. 2012. Expression of renal crystallization inhibitors in experimental nephrolithiasis. Bull. Exp. Biol. Med. 153: 279-282.
5. Li, Y., et al. 2012. Tubular cell dedifferentiation and peritubular inflammation are coupled by the transcription regulator Id1 in renal fibrogenesis. Kidney Int. 81: 880-891.
6. Zhou, D., et al. 2012. Tubule-specific ablation of endogenous β-catenin aggravates acute kidney injury in mice. Kidney Int. 82: 537-547.
7. Zheleznova, N.N., et al. 2012. Mitochondrial proteomic analysis reveals deficiencies in oxygen utilization in medullary thick ascending limb of Henle in the Dahl salt-sensitive rat. Physiol. Genomics 44: 829-842.