SANTA CRUZ BIOTECHNOLOGY, INC.

THP (B-2): sc-271022

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

CHROMOSOMAL LOCATION

Genetic locus: UMOD (human) mapping to 16p12.3; Umod (mouse) mapping to 7 F2.

SOURCE

THP (B-2) is a mouse monoclonal antibody raised against amino acids 291-425 of THP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

THP (B-2) is available conjugated to agarose (sc-271022 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271022 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271022 PE), fluorescein (sc-271022 FITC), Alexa Fluor® 488 (sc-271022 AF488), Alexa Fluor® 546 (sc-271022 AF546), Alexa Fluor® 594 (sc-271022 AF594) or Alexa Fluor® 647 (sc-271022 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271022 AF680) or Alexa Fluor® 790 (sc-271022 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

THP (B-2) is recommended for detection of THP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for THP siRNA (h): sc-41064, THP siRNA (m): sc-41065, THP shRNA Plasmid (h): sc-41064-SH, THP shRNA Plasmid (m): sc-41065-SH, THP shRNA (h) Lentiviral Particles: sc-41064-V and THP shRNA (m) Lentiviral Particles: sc-41065-V.

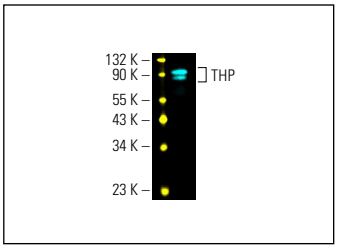
Molecular Weight of THP: 85 kDa.

Positive Controls: human breast extract: sc-363753.

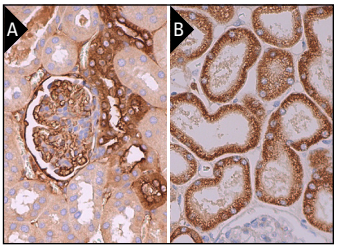
STORAGE

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

DATA



THP (B-2) Alexa Fluor® 647: sc-271022 AF647. Direct fluorescent western blot analysis of THP expression in human breast tissue extract. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 488: sc-516790.



THP (B-2): sc-271022. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Cornec-Le Gall, E., et al. 2018. Monoallelic mutations to DNAJB11 cause atypical autosomal-dominant polycystic kidney disease. Am. J. Hum. Genet. 102: 832-844.
2. Yap, N.Y., et al. 2019. Establishment of epithelial and fibroblast cell cultures and cell lines from primary renal cancer nephrectomies. Cell Biol. Int. 43: 715-725.
3. Shi, M., et al. 2019. Urinary angiotensinogen predicts renal disease activity in lupus nephritis. Antioxid. Redox Signal. 31: 1289-1301.
4. Plotkin, M., et al. 2020. An uromodulin mutation drives autoimmunity and kidney mononuclear phagocyte endoplasmic reticulum stress. Am. J. Pathol. 190: 2436-2452.
5. Dong, L., et al. 2020. Comprehensive evaluation of methods for small extracellular vesicles separation from human plasma, urine and cell culture medium. J. Extracell. Vesicles 10: e12044.
6. Arman, T., et al. 2021. Sub-chronic microcystin-LR renal toxicity in rats fed a high fat/high cholesterol diet. Chemosphere 269: 128773.
7. de Abreu, R.C., et al. 2021. Exogenous loading of miRNAs into small extracellular vesicles. J. Extracell. Vesicles 10: e12111.
8. Prot-Bertoye, C., et al. 2021. Differential localization patterns of claudin 10, 16, and 19 in human, mouse, and rat renal tubular epithelia. Am. J. Physiol. Renal Physiol. 321: F207-F224.
9. Correll, V.L., et al. 2022. Optimization of small extracellular vesicle isolation from expressed prostatic secretions in urine for in-depth proteomic analysis. J. Extracell. Vesicles 11: e12184.

RESEARCH USE

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