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Anti-UMOD Antibody Picoband®

Catalog Number: A01303-2

About UMOD

Uromodulin (UMOD), also known as Tamm–Horsfall protein (THP), is a glycoprotein that in humans is encoded by the UMOD gene. The protein encoded by this gene is the most abundant protein in mammalian urine under physiological conditions. Its excretion in urine follows proteolytic cleavage of the ectodomain of its glycosyl phosphatidylinositol-anchored counterpart that is situated on the luminal cell surface of the loop of Henle. This protein may act as a constitutive inhibitor of calcium crystallization in renal fluids. Excretion of this protein in urine may provide defense against urinary tract infections caused by uropathogenic bacteria. Defects in this gene are associated with the renal disorders medullary cystic kidney disease-2 (MCKD2), glomerulocystic kidney disease with hyperuricemia and isosthenuria (GCKDHI), and familial juvenile hyperuricemic nephropathy (FJHN). Alternative splicing of this gene results in multiple transcript variants.

Overview

Product Name	Anti-UMOD Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-UMOD Antibody Picoband® catalog # A01303-2. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P07911

Technical Details

Immunogen	E.coli-derived human UMOD recombinant protein (Position: E43-S618).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse, Rat Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, -

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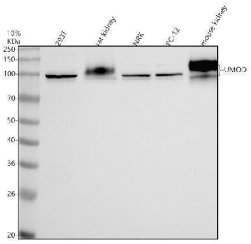
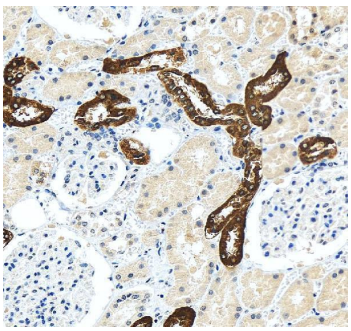
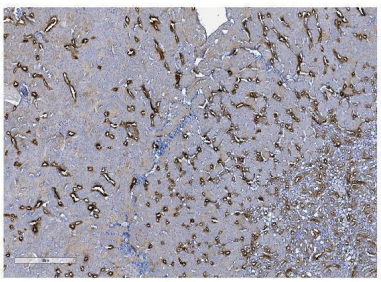
Anti-UMOD Antibody Picoband® (A01303-2) Images



Western blot analysis of UMOD using anti-UMOD antibody (A01303-2). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human 293T whole cell lysates, Lane 2: rat kidney tissue lysates, Lane 3: rat NRK whole cell lysates, Lane 4: rat PC-12 whole cell lysates, Lane 5: mouse kidney tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-UMOD antigen affinity purified polyclonal antibody (A01303-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for UMOD at approximately 90-110 kDa. The expected band size for UMOD is at 70 kDa.



IHC analysis of Uromodulin/UMOD using anti-Uromodulin/UMOD antibody (A01303-2). Uromodulin/UMOD was detected in a paraffin-embedded section of human kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Uromodulin/UMOD Antibody (A01303-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of UMOD using anti UMOD antibody (A01303-2). UMOD was detected in paraffin-embedded section of mouse kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-UMOD Antibody (A01303-2) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

IHC analysis of UMOD using anti UMOD antibody (A01303-2). UMOD was detected in paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution).

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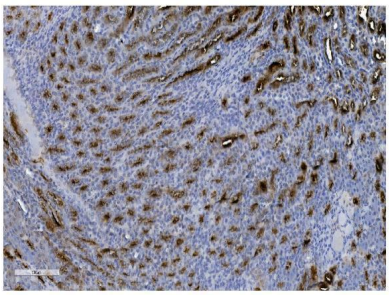
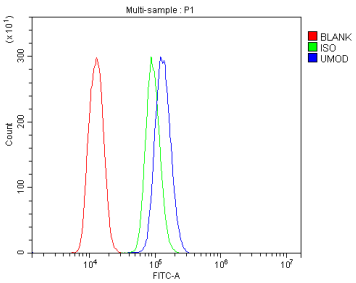


The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-UMOD Antibody (A01303-2) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of U937 cells using anti-UMOD antibody (A01303-2).Overlay histogram showing U937 cells stained with A01303-2 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-UMOD Antibody (A01303-2,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Anti-UMOD Antibody

For Research Use Only. Not for use in diagnostic procedures.