

Product Specification Sheet

Urea Transporter 2 (rUT2) Antibodies

Cat # RUT21-P	Rat UT2 control peptide	SIZE: 100 ug
Cat # RUT21-S	Rabbit Anti-rat UT2 antiserum #1	SIZE: 100 ul
Cat # RUT21-A	Rabbit Anti-rat UT2 Ig G #1 (aff pure)	SIZE: 100 ug

The urea transporter is responsible for urea accumulation in the renal medulla, and consequently plays a central role in the urinary concentrating mechanism. Since, urea is the major end product of nitrogen metabolism and it is concentrated up to four times higher than that of plasma. A rapid, passive transport of urea through the membranes of the IMCD is responsible for generation of high urea concentration in the inner medullary interstitium. Recently, a vasopressin-sensitive **urea transporter** (UT2; 397 AA) from rabbit and its homolog from rat (**rUT2**; 397 AA) have been cloned.

Protein name Urea transporter, kidney
Gene name : Slc14a2 ; Synonyms: Ut2
FUNCTION: Specialized low-affinity urea transporter. Mediates urea transport in kidney.
SUBCELLULAR LOCATION:: Multi-pass membrane protein.
TISSUE SPECIFICITY: Kidney.
SIMILARITY: Belongs to the urea transporter family.

Source of Antigen and Antibodies

Antigen	19aa peptide of Rat UT2 (protein accession #Q62668, refs 1); Designated RUT21-P or control peptide). conjugated to KLH; Epitope location~ C-terminal, Cytoplasmic domain
Ab Format	Rabbit, polyclonal Unpurified antiserum (cat #RUT21-S) Aff pure IgG (cat #RUT21-A)
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 µg/ml for affinity pure using Chemiluminescence technique). See published papers below.

ELISA (1:100K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: we recommend the use of affinity purified antibody at 2-10 µg/ml (2). Adherent cells can be fixed in 50% methanol-50% acetone or 1% paraformaldehyde (3). See published papers below.

Specificity & Cross-reactivity

Rat UT2 peptide (RUT21-P) is 89% conserved in human, 94% with mouse, 84% in rabbit UT2. Antibody crossreactivity of anti-rat UT2 with other species is not known. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity.

General References: 1. Smith, CP et al (1995) J. Clin. Invest. 96, 1556-1563. 2. Nielsen, S et al (1996) Proc. Natl. Acad. Sci. 93, 5495-5500; 3. You, G et al (1993) Nature 365, 844-847.

Related material available from ADI

Antibodies for AQP1, AQP2, AQP3, AQP4, AQP5, AQP6, AQP7, AQP8, AQP9, AQP-AP, & Rat Urea Transporter (rUT2)

VMAT1, VMAT2, Vasopressin receptor (AVPR-V1 and V2)

Western blot Recycling kit (probe same blot with multiple antibodies)

RUT21-S-A-P

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