

Product Specification Sheet

**Urate Transporter 1 (URAT1) Antibodies**

Cat. # URAT11-P	Human URAT1 Control/blocking Peptide	<b>SIZE:</b> 100 ug
Cat. # URAT11-S	Rabbit Anti-Human URAT1 antiserum	<b>SIZE:</b> 100 ul
Cat. # URAT11-A	Rabbit Anti-Human URAT1 IgG (aff pure)	<b>SIZE:</b> 100 ug

Mammalian kidney and liver are critical in maintaining physiological ionic environment. Kidney specializes in removing toxins, drugs, and other organic anions from the blood by a process called "renal secretion". Besides kidney, anionic substrates are also transported in other organs, e.g., choroid plexus, eye, airway, and placenta. Several multispecific **OATs** (OAT1-3, OAT-K1 and OATK2) and **OATPs** (organic anion transporting polypeptides; **oatp1-3**), have been cloned and characterized from various tissues. OATPs family of proteins are very similar in sequence and secondary protein structure (up to 12 transmembrane domains with cytoplasmic N and C-terminus).

Urate, a naturally occurring product of purine metabolism, is a scavenger of oxidants. Urate exists primarily as a weak acid (pKa ~5.75). Urate concentration is quite high (~200-500 uM) in human due to loss of uricase gene and the presence of an effective reabsorption system. Recently an OAT-related transporter, URAT1, has been identified in the kidney that acts urate-anion exchanger and effectively regulates urate levels. URAT1/RST/SLC22A12 (mouse 553-aa, human 555-aa, chromosome 11q13, ~40 kDa) is ~42% identical with OAT4. Like OAT4, it is predicted to display 12-TM domains with cytoplasmic N and C-terminus. URAT1 is prominent in epithelial cells of proximal tubule of the renal cortex. Patients with idiopathic renal hypouricemia (lack of blood uric acid) have defects in URAT1 gene.

**Protein name** Solute carrier family 22 member 12  
**Synonym** Organic anion transporter 4-like protein  
**Gene name** Name: SLC22A12

**Source of Antigen and Antibodies**

<b>Antigen</b>	11-aa peptide from <b>human URAT1 (1)</b> ; (protein accession #Q96S37, refs 1) <b>Designation (#URAT11-P, control/blocking peptide)</b> conjugated to KLH; Epitope location ~ C-terminus Cytoplasmic domain
<b>Ab Host/type</b>	Rabbit, Aff pure IgG, purified over (Cat # <b>URAT11-A</b> ) purified over the antigen column
<b>2-Ab</b>	Cat # 20320, <b>goat anti-rabbit IgG-HRP</b> (AP, biotin, FITC conjugates also available).
<b>-ve control</b>	# 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 1 mg/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 20°C and powder at 4°C or -20°C..

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

**Stability:** 6-12 months at -20°C or below.  
**Shipping:** 4°C for solutions and room temp for powder

**Recommended Usage**

**Western Blotting** (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

**ELISA:** Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

**Histochemistry & Immunofluorescence:** Not tested. We recommend the use of affinity purified antibody at 5-20 ug/ml.

**Specificity & Cross-reactivity**

The URAT11-P control peptide is 100% conserved in human URAT1/RST or OAT-4-like protein, and only 54% in mouse RST/URAT1. No significant sequence homology of URAT11-P is observed with other OAT4 or other proteins. Antibody cross-reactivity in various species has not been studied. 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) Entomoto A et al (2002) Nature 417, 447-452; Mori K et al (1997) FEBS Lett. 417, 371-374

\*This product is for In vitro research use only.

**Related material available from ADI**

Antibodies OAT1-7 and CLC-K1; KCCL1-3; AQP-9 and RUT; OCT and OAT, AE-3, and NACX

URAT11-S-A-P 71001J

**India Contact:**

**Life Technologies (India) Pvt. Ltd.**

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi - 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444  
 Email: [customerservice@lifetechindia.com](mailto:customerservice@lifetechindia.com) Website: [www.lifetechindia.com](http://www.lifetechindia.com)