ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Organic Anion Transporter 2 (OAT2) Antibodies

□ Cat. # OAT21-P	Rat OAT2 control/blocking Peptide	**SIZE**: 100 ug
□ Cat. # OAT21-S	Rabbit Anti-rat OAT2 antiserum	**SIZE**: 100 ul
□ Cat. # OAT21-A	Rabbit Anti-rat OAT2 IgG (affinity pure)	**SIZE**: 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).

OAT2 previously called **NLT** (novel liver-specific transporter). OAT2 (rat 535 aa; human 548 aa) is predominantly expressed in liver, and to a lower level in kidney. OAT2 mediates sodium-independent, multispecific organic anion transport (PAH, salicylate and acetylsalicylate, prostaglandin E2, and dicarboxylate).

Source of Antigen and Antibodies

Antigen	15aa peptide of Rat OAT2/ Solute carrier family 22 member 7; (535-aa, protein accession # sp|Q5RLM2.1|S22A7_RAT) **Designated (OAT21-P or control peptide). conjugated to KLH;** epitope location ~ N-terminus, Extracellular domain
Ab Host/type	Rabbit, polyclonal; Unpurified antiserum (cat #OAT21-S) Aff pure IgG (**cat #OAT21-A**)
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	**# 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 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 1-20 ug/ml.

Specificity & Cross-reactivity

The 15 AA rat OAT21-P control peptide is 85% conserved in mouse, 93% in hamster, 87% in chicken & Pig, 82% in zebra, 80% in rabbit, 80% in cat, horse, killer whale, manatee, 73% in bovine, marmoset, Tasmanian devil, star nosed-mole, 78% in human, 67% in monkey and baboon OAT2. No significant sequence homology is detected with other OAT1, Oat3, or OATPs or OATKs or other proteins. Antibody cross-reactivity in various species has not been studied. The OAT21-P 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 (see detailed protocol see detailed protocol at the web site).

General References: Simonson GD et al (1994) J Cell. Sc. 107, 1065-1072; Sekine T (1998) FEBS Lett. 429, 179-182; Morita N (2009) Drug Metabol. Dispos. 33, 1151-1157; Kim RB et al (1999) Gene Accession # AF097518; Sekine T et al (1998) FEBS Lett. 12, 179-182;

Citations of for ADI Antibodies (see updated list at the web site)
Lash LH 2006 Toxicology, 228, 200-218 WB
Human Proximal Tubular Cells
*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

Recycle your blot in Just 5-10 min. (use the same strip for various Dopamine receptors) New formulation will strip antibodies in just a few minutes at room temp. (no boiling or pungent mercaptoethanol).
OAT21-S-A-P 130923A

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