ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Organic Anion Transporter 3 (OAT3) Antibodies

Cat. # OAT31-P	Rat OAT3 control/blocking Peptide	**SIZE**: 100 ug
Cat. # OAT31-S	Rabbit Anti-rat OAT3 antiserum	**SIZE**: 100 ul
Cat. # OAT31-A	Rabbit Anti-rat OAT3 IgG (aff 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).

Recently **OAT3** (rat 536-aa, human 568 aa) has been cloned that is most closely related to OAT1 (~49% identity). Rat OAT3 is expressed in the liver, brain, kidney and eye. OAT3 also mediates Na-independent uptake of several organic anions (PAH, ochratoxin, and estrone sulfate, etc). OAT3 shows 92% homology with mouse **Roct** (reduced in osteosclerosis transporter), possibly an ortholog of rat OAT3. As compared to OAT1-2, strong expression of OAT3 in brain suggests its role in removing organic anion in the brain.

Source of Antigen and Antibodies

Antigen	16aa peptide of Rat OAT3 ; (gene accession # Np112622.1) **Designated (OAT31-P or control peptide)** conjugated to KLH; Epitope location ~N-terminus
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat #OAT31-S) Aff pure IgG (**cat #OAT31-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 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: We recommend the use of affinity purified antibody at 2-20 ug/ml. See refs 2.

Specificity & Cross-reactivity

The 16 AA rat OAT31-P control peptide is 93% conserved in mouse, 87% in, rabbit and human OAT3. No significant sequence homology is detected with other OATs 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: **Kushuhara h et al (1999) J Biol. Chem. 274, 13675-13680; Race JE et al (1999) BBRC 255, 508**

(2) Citations of ADI's Antibodies (see web site for updated list)

OAT3 Bahn A 2005 Am J Physiol Cell Physiol, 289: C1075 - C1084 IF

*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

Study distribution of proteins in pre-**made Kidney blots** from 7 defined regions of rat kidney

Recycle your blot in Just 5-10 min. (use the same strip for various OATs)

OAT31-S-A-P 60908A

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