ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Organic Anion Transporter 4 (OAT4) Antibodies

Cat. # OAT41-P	Human OAT4 control/blocking Peptide	**SIZE**: 100 ug
Cat. # OAT41-S	Rabbit Anti-Human OAT4 antiserum	**SIZE**: 100 ul
Cat. # OAT41-A	Rabbit Anti-Human OAT4 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).

Most recently, a novel member of the OAT family, **OAT4**, has been cloned and characterized. OAT4 (human 550 aa) is ~38-44% identical to other OATs. It is prominently expressed in the kidney and placenta. OAT4 interacted with chemically heterogeneous anionic compounds (nonsteroidal anti-inflammatory drugs, diuretics, sulfobromopthalein, penicillin G, and bile acid salts). OAT4 may help in eliminating harmful anionic substances and protect the fetus.

FUNCTION: Mediates saturable uptake of estrone sulfate,dehydroepiandrosterone sulfate and related compounds.
SUBCELLULAR LOCATION: Cell membrane; Multi-pass membrane protein.
SIMILARITY: Belongs to the major facilitator superfamily. Organic cation transporter family.
Protein name Solute carrier family 22 member 11
Synonym Organic anion transporter 4
Gene name Name: SLC22A11; Synonyms: OAT4

Source of Antigen and Antibodies

Antigen	18-aa peptide from **Human OAT4-1**; (protein accession #Q9NSA0 , refs 1) **Designation (OAT41-P, control/blcoking peptide**) conjugated to KLH; Epitope location ~C-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal Aff pure IgG (Cat # OAT41-A) purified over the antigen column
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (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: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

The Human OAT41-P control peptide is unique to OAT4. OAT4 sequences from other species are not yet available. 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:Cha SH et al (2000) J. Biol. Chem. 275, 4507-4512. .

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

Zhou F, 2004, Mol. Pharmacol.,65: 1141 – 1147, WB
Ugele B, 2003, Am J Physiol Endocrinol Metab : 284, 390-398. IHC

*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 OATs) (no boiling or pungent mercaptoethanol).

OAT41-S-A-P 50127A

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