ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Organic anion transporting polypeptide 3 (Oatp3) Antibodies

Cat. # OATP32-P	Rat OATP3 control/blocking Peptide	**SIZE**: 100 ug
Cat. # OATP32-S	Rabbit Anti-rat OATP3 antiserum #1	**SIZE**: 100 ul
Cat. # OATP32-A	Rabbit Anti-rat OATP3 Ig G #1 (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, LST-1, and PGT**), have been cloned and characterized from various tissues. OATPs family of proteins share significant sequence homology, and general secondary protein structure (up to 12 transmembrane domains with cytoplasmic N and C-terminus).

Oatp3 (670 aa; 12 TM), cloned from rat retina, shares ~80-83% identity with oatp1-2 and ~77% to rat OAT-K1. Oatp3 is highly expressed in the kidney, and moderately in the retina. Oatp3 mediates uptake of taurocholate, thyroxine, and triiodothyronine. Most of the T4 secreted from the thyroid is deiodinated in peripheral tissues. The liver and kidney are the major sites for the production of T3 and T4. Therefore, oatp3 may play a critical role in transporting thyroid hormones from the circulation to the deiodination sites in the kidney.

FUNCTION: Mediates the Na(+)-independent transport of organic anions such as taurocholate and thyroid hormones.
SUBCELLULAR LOCATION: Membrane; Multi-pass membrane protein.
SIMILARITY: Belongs to the organo anion transporter (TC 2.A.60) family [view classification].
Protein name Solute carrier organic anion transporter family member 1A5
Synonyms Solute carrier family 21 member 7
Sodium-independent organic anion transporter 3
Organic anion-transporting polypeptide 3
OATP3
Gene name Name: Slco1a5; Synonyms: Oatp3, Slc21a7, Slco1a2

Source of Antigen and Antibodies

Antigen	12aa peptide of Rat OATP3/Slco1a5; (protein accession #O88397, refs 1) **Designated (OATP32-P or control peptide).** conjugated to KLH; Epitope location Mid-region
Ab Host/type	Rabbit, polyclonal purified Aff IgG(**cat #OATP32-A**) purified over the antigen column
Ab Format	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 in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

The 12 AA rat OATP31-P control peptide is unique to rat OATP3 and shows 75% homology with mouse OATP3. No significant sequence homology is detected with other oatp2 and 3 or human OATP or LST-1. 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:

Abe T et al (1998) J. Biol. Chem. 273, 22395-22401; Noe B et al (1997) PNAS 94, 10346-10350; Abe T et al (1998) J. Biol. Chem. 273, 22395-22401; Kakyo M et al (1999) FEBS lett. 445, 343-346

*This product is for In vitro research use only.

Related material available from ADI

Antibodies CLC1-7 and CLC-K1; KCCL1-3; AQP-9 and RUT; OCT and OAT, AE-3, and NACX, NaPi and NaHCO3 transporters

Study distribution of protein in kidney in discrete region of rat kidney using pre-made protein blots (call for details)

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).

OATP32-S-A-P 70910J

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