ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Liver-Specific Transporter (LST-1) Antibodies

Cat. # LST11-P	Human LST-1 Control Peptide	**SIZE**: 100 ug
Cat. # LST11-S	Rabbit Anti-Human LST-1 antiserum #1	**SIZE**: 100 ul
Cat. # LST11-A	Rabbit Anti-Human LST-1 IgG#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).

Most recently, a **novel liver-specific OAT**, **LST-1**, has been cloned from human liver. It has also been detected in mouse and rat liver. No significant expression of LST-1 was detected in other tissues. Human LST-1 (691 aa, 12 TM) shares 42% homology with human OATP, rat oatp1-3, and OATK-1, and 35% with PGT. Phylogenetic analyses places LST-1 between oatp and PGT. LST-1 has wide substrate specificity (taurocholate, conjugated steroids, PGE2, Thromboxane B2, leukotrienes, and T3). Therefore, LST-1 may be more important for clearance of bile acids and organic anions in liver.

Source of Antigen and Antibodies

Antigen	17-aa peptide of human LST-1/OATP-2/OATP-C/OATP8 ; gene accession # Q9Y6L6, refs 1) **Designated (LST11-P or control peptide /blocking peptide**) conjugated to KLH; epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (**#LST11**-S) and IgG, purified over antigen-agarose (Cat # **LST11**-A)
2-Ab	Cat # 20320, **goat anti-rabbit IgG-HRP** (AP, biotin, FITC conjugates also available).
-ve control IgG	# 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 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 antiserum and 1-10 ug/ml for affinity pure IgG using ECL). (see published refs using this antibody in 2).

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 in paraformaldehyde fixed sections of tissues. (see published refs using this antibody in 2).

Specificity & Cross-reactivity

Human LST11-P control peptide unique to human LST-1. No significant sequence homology is detected with other oatp1-3, OATP or PGT (2). 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 (see detailed protocol see detailed protocol at the web site).).

General References: Abe T et al (1999) J. Biol. Chem. 274, 17159-17163, Jacqueline E et al (1994) PNAS 91, 133-137; Kullak-Ublick, GA et al (1995) Gastroenterol. 109, 1274-12.

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

Wong H 2005, Toxicol. Sci., 84: 232 – 242, WB
Freeman, WM 2001 Neuroscience 108, 371-380 WB
Kuroda M 2004 J Gastroenterol. Hepatology 19, 146-153 WB
Higuchi K 2004 Hepatology Research 29, 60-66, WB
Nozawa A 2002 J. Pharmacol. Exp. Ther. 302: 804, WB, IHC

*This product is for In vitro research use only.

Related material available from ADI

LST11-S-A-P 91103A

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