

OAT6 (D-5): sc-514966

BACKGROUND

The organic anion transporter (OAT) family of proteins is comprised of OAT1 (SLC22A6), OAT2 (SLC22A7), OAT3 (SLC22A8), OAT4 (SLC22A11), OAT5 (SLC22A19), OAT6 (SLC22A20) and URAT1 (SLC22A12). The OAT family mediates the absorption, distribution and excretion of endogenous metabolites, such as urate and acidic neurotransmitter metabolites, as well as a multitude of exogenous compounds, including antibiotics, antihypertensives, antivirals, anti-inflammatory drugs, diuretics and uricosurics. Members of the OAT family are mainly located in kidney with some specific members also being expressed in liver, placenta and brain. Disruption of OAT function in any of these organs may lead to renal, hepatic, neurological and fetal toxicity and diseases. OAT6 (organic anion transporter 6) is a 555 amino acid multi-pass membrane protein that belongs to the major facilitator superfamily and organic cation transporter family. Existing as two alternatively spliced isoforms, OAT6 mediates the uptake of estrone sulfate. OAT6 is inhibited by probenecid, propionate, 2-methylbutyrate, 3-methylbutyrate, benzoate, heptanoate and 2-ethylhexanoate and may act as an odorant transporter.

REFERENCES

- Monte, J.C., et al. 2004. Identification of a novel murine organic anion transporter family member, OAT6, expressed in olfactory mucosa. *Biochem. Biophys. Res. Commun.* 323: 429-436.
- Schnabolk, G.W., et al. 2006. Transport of estrone sulfate by the novel organic anion transporter Oat6 (Slc22a20). *Am. J. Physiol. Renal Physiol.* 291: F314-F321.
- Kaler, G., et al. 2006. Olfactory mucosa-expressed organic anion transporter, Oat6, manifests high affinity interactions with odorant organic anions. *Biochem. Biophys. Res. Commun.* 351: 872-876.
- Jacobsson, J.A., et al. 2007. Identification of six putative human transporters with structural similarity to the drug transporter SLC22 family. *Genomics* 90: 595-609.
- Kaler, G., et al. 2007. Structural variation governs substrate specificity for organic anion transporter (OAT) homologs. Potential remote sensing by OAT family members. *J. Biol. Chem.* 282: 23841-23853.
- Zhou, F. and You, G. 2007. Molecular insights into the structure-function relationship of organic anion transporters OATs. *Pharm. Res.* 24: 28-36.

CHROMOSOMAL LOCATION

Genetic locus: SLC22A20 (human) mapping to 11q13.1; Slc22a20 (mouse) mapping to 19 A.

SOURCE

OAT6 (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 536-552 within a C-terminal extracellular domain of OAT6 of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OAT6 (D-5) is available conjugated to agarose (sc-514966 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514966 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514966 PE), fluorescein (sc-514966 FITC), Alexa Fluor® 488 (sc-514966 AF488), Alexa Fluor® 546 (sc-514966 AF546), Alexa Fluor® 594 (sc-514966 AF594) or Alexa Fluor® 647 (sc-514966 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514966 AF680) or Alexa Fluor® 790 (sc-514966 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514966 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

OAT6 (D-5) is recommended for detection of OAT6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

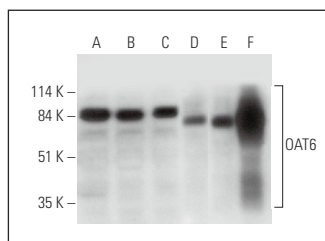
Suitable for use as control antibody for OAT6 siRNA (h): sc-96860, OAT6 siRNA (m): sc-150153, OAT6 shRNA Plasmid (h): sc-96860-SH, OAT6 shRNA Plasmid (m): sc-150153-SH, OAT6 shRNA (h) Lentiviral Particles: sc-96860-V and OAT6 shRNA (m) Lentiviral Particles: sc-150153-V.

Molecular Weight of OAT6 isoforms 1/2: 60/37.

Molecular Weight of OAT6: 80 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

DATA



OAT6 (D-5): sc-514966. Western blot analysis of OAT6 expression in Hela (A), Jurkat (B) and K-562 (C) whole cell lysates and human liver (D), human brain (E) and human ovary (F) tissue extracts.

RESEARCH USE

For research use only, not for use in diagnostic procedures.