

Oat5 (S-13): sc-109029

BACKGROUND

Oat5, also known as solute carrier family 22 member 19 (Slc22a19), or solute carrier family 22 member 9 (Slc22a9), is a 551 amino acid member of the organic cation transporter family of proteins. Members of the Slc22 family primarily mediate anion transport and are expressed mainly in liver and kidney. Oat5 has been shown to transport certain organic anions and other members of the Slc22 family. However, fewer numbers of substrates have been identified for Oat5, suggesting that it may have greater specificity than the other members of the family. The gene encoding Oat5 maps to mouse chromosome 19 A.

REFERENCES

1. Cha, S.H., Sekine, T., Kusuhara, H., Yu, E., Kim, J.Y., Kim, D.K., Sugiyama, Y., Kanai, Y. and Endou, H. 2000. Molecular cloning and characterization of multispecific organic anion transporter 4 expressed in the placenta. *J. Biol. Chem.* 275: 4507-4512.
2. Sun, W., Wu, R.R., van Poelje, P.D. and Erion, M.D. 2001. Isolation of a family of organic anion transporters from human liver and kidney. *Biochem. Biophys. Res. Commun.* 283: 417-422.
3. Enomoto, A., Takeda, M., Taki, K., Takayama, F., Noshiro, R., Niwa, T. and Endou, H. 2003. Interactions of human organic anion as well as cation transporters with indoxyl sulfate. *Eur. J. Pharmacol.* 466: 13-20.
4. Ekaratanawong, S., Anzai, N., Jutabha, P., Miyazaki, H., Noshiro, R., Takeda, M., Kanai, Y., Sophasan, S. and Endou, H. 2004. Human organic anion transporter 4 is a renal apical organic anion/dicarboxylate exchanger in the proximal tubules. *J. Pharmacol. Sci.* 94: 297-304.
5. Yamashita, F., Ohtani, H., Koyabu, N., Ushigome, F., Satoh, H., Murakami, H., Uchiyama, T., Nakamura, T., Kuwano, M., Tsujimoto, M. and Sawada, Y. 2006. Inhibitory effects of angiotensin II receptor antagonists and leukotriene receptor antagonists on the transport of human organic anion transporter 4. *J. Pharm. Pharmacol.* 58: 1499-1505.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607579. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Yokoyama, H., Anzai, N., Ljubojevic, M., Ohtsu, N., Sakata, T., Miyazaki, H., Nonoguchi, H., Islam, R., Onozato, M., Tojo, A., Tomita, K., Kanai, Y., Igarashi, T., Sabolic, I. and Endou, H. 2008. Functional and immunochemical characterization of a novel organic anion transporter OAT8 (SLC22A9) in rat renal collecting duct. *Cell. Physiol. Biochem.* 21: 269-278.
8. Ogasawara, K., Terada, T., Motohashi, H., Asaka, J., Aoki, M., Katsura, T., Kamba, T., Ogawa, O. and Inui, K. 2008. Analysis of regulatory polymorphisms in organic ion transporter genes (SLC22A) in the kidney. *J. Hum. Genet.* 53: 607-614.
9. Ugele, B., Bahn, A. and Rex-Haffner, M. 2008. Functional differences in steroid sulfate uptake of organic anion transporter 4 (OAT4) and organic anion transporting polypeptide 2B1 (OATP2B1) in human placenta. *J. Steroid Biochem. Mol. Biol.* 111: 1-6.

CHROMOSOMAL LOCATION

Genetic locus: Slc22a9 (mouse) mapping to 19 A.

SOURCE

Oat5 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Oat5 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109029 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Oat5 (S-13) is recommended for detection of Oat5 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Oat5 siRNA (m): sc-150152, Oat5 shRNA Plasmid (m): sc-150152-SH and Oat5 shRNA (m) Lentiviral Particles: sc-150152-V.

Molecular Weight of Oat5: 75 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.