

Oatp1/3 (N-16): sc-47265

BACKGROUND

The organic anion transporting polypeptide (OATP) family of proteins play a role in drug absorption, distribution and excretion. OATP proteins mediate the uptake of a broad range of substrates, including bile salts, hormones, drugs and antibiotics, and they are expressed in various tissues, such as gut, brain, kidney and liver. Oatp3, also known as Slco1a5 and Slc21a7, is a 670 amino acid member of the OATP protein family. As a multi-pass membrane protein, Oatp3 mediates the transport of organic anions, such as thyroid hormones and taurocholate during the absorption of bile acids in the liver. The gene that encodes Oatp3 maps to mouse chromosome 6 G2.

REFERENCES

- Cattori, V., et al. 2001. Localization of organic anion transporting polypeptide 4 (OATP4) and comparison of its substrate specificity with OATP1, OATP2 and OATP3. *Pflugers Arch.* 443: 188-195.
- Walters, H.C., et al. 2001. Expression, transport properties, and chromosomal location of organic anion transporter subtype 3. *Am. J. Physiol. Gastrointest. Liver Physiol.* 279: G1188-G1200.
- Yarim, M., et al. 2004. Application of QSAR analysis to organic anion transporting polypeptide 1a5 (OATP1a5) substrates. *Bioorg. Med. Chem.* 13: 463-471.
- Hosoya, K., et al. 2004. Transporter mRNA expres epithelial cell line (TR-SIE). *Drug Metab. Pharmacokinet.* 19: 264-269.
- Kusuhara, H. and Sugiyama, Y. 2004. Efflux transport systems for organic anions and cations at the blood-CSF barrier. *Adv. Drug Deliv. Rev.* 56: 1741-1763.
- Ohtsuki, S., et al. 2004. Localization of organic anion transporting polypeptide 3 (oatp3) in mouse brain parenchymal and capillary endothelial cells. *J. Neurochem.* 90: 743-749.
- Maeda, T., et al. 2005. Regulation of drug transporters by the farnesoid X receptor in mice. *Mol. Pharm.* 1: 281-289.

CHROMOSOMAL LOCATION

Genetic locus: Slco1a1/Slco1a5 (mouse) mapping to 6 G2.

SOURCE

Oatp1/3 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Oatp3 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-47265 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Oatp1/3 (N-16) is recommended for detection of Oatp1 and Oatp3 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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); may cross-react with a broad range of OATP members.

Oatp1/3 (N-16) is also recommended for detection of Oatp1 and Oatp3 in additional species, including equine, canine, bovine and porcine.

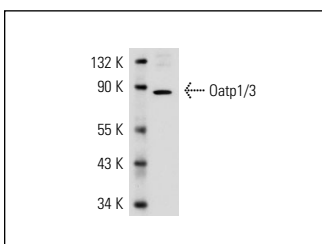
Molecular Weight of Oatp1/3: 76 kDa.

Positive Controls: c4 whole cell lysate: sc-364186.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Oatp1/3 (N-16): sc-47265. Western blot analysis of Oatp1/3 expression in c4 whole cell lysate.

SELECT PRODUCT CITATIONS

- Su, L., et al. 2011. P-glycoprotein regulates blood-testis barrier dynamics via its effects on the occludin/zonula occludens 1 (ZO-1) protein complex mediated by focal adhesion kinase (FAK). *Proc. Natl. Acad. Sci. USA* 108: 19623-19628.
- Su, L., et al. 2012. Regulation of drug transporters in the testis by environmental toxicant cadmium, steroids and cytokines. *Spermatogenesis* 2: 285-293.

RESEARCH USE

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