

PGT (G-17): sc-103085

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. OATP2A1, also known as SLC02A1 (solute carrier organic anion transporter family, member 2A1), SLC21A2 or PGT (in both humans and rodents), is a 643 amino acid multi-pass membrane protein that belongs to the organic anion transporter family. Expressed ubiquitously, OATP2A1 is thought to mediate the release, transepithelial transport and clearance of prostaglandins from cells to other areas of the body. The gene encoding OATP2A1 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

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2. Lu, R., et al. 1996. Cloning, *in vitro* expression, and tissue distribution of a human prostaglandin transporter cDNA(hPGT). *J. Clin. Invest.* 98: 1142-1149.
3. Lu, R. and Schuster, V.L. 1998. Molecular cloning of the gene for the human prostaglandin transporter hPGT: gene organization, promoter activity, and chromosomal localization. *Biochem. Biophys. Res. Commun.* 246: 805-812.
4. Hagenbuch, B. and Meier, P.J. 2003. The superfamily of organic anion transporting polypeptides. *Biochim. Biophys. Acta* 1609: 1-18.
5. Hagenbuch, B. and Meier, P.J. 2004. Organic anion transporting polypeptides of the OATP/SLC21 family: phylogenetic classification as OATP/SLCO superfamily, new nomenclature and molecular/functional properties. *PLoS Arch.* 447: 653-665.
6. Kang, J., et al. 2006. Functional characterization of prostaglandin transporter and terminal prostaglandin synthases during decidualization of human endometrial stromal cells. *Hum. Reprod.* 21: 592-599.
7. Hagenbuch, B. 2007. Cellular entry of thyroid hormones by organic anion transporting polypeptides. *Best Pract. Res. Clin. Endocrinol. Metab.* 21: 209-221.
8. Holla, V.R., et al. 2008. Regulation of prostaglandin transporters in colorectal neoplasia. *Cancer Prev. Res.* 1: 93-99.

CHROMOSOMAL LOCATION

Genetic locus: SLC02A1 (human) mapping to 3q22.1; Slco2a1 (mouse) mapping to 9 F1.

SOURCE

PGT (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PGT 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 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103085 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PGT (G-17) is recommended for detection of PGT of mouse, rat and human 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); non cross-reactive with other OATP family members.

PGT (G-17) is also recommended for detection of PGT in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PGT siRNA (h): sc-78211, PGT siRNA (m): sc-152198, PGT shRNA Plasmid (h): sc-78211-SH, PGT shRNA Plasmid (m): sc-152198-SH, PGT shRNA (h) Lentiviral Particles: sc-78211-V and PGT shRNA (m) Lentiviral Particles: sc-152198-V.

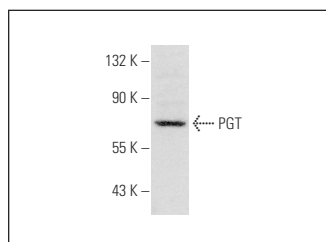
Molecular Weight of PGT: 80 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176.

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



PGT (G-17): sc-103085. Western blot analysis of PGT expression in U-251-MG whole cell lysate.

RESEARCH USE

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