

OCT2 (H-62): sc-292622

BACKGROUND

Organic cation transporters (OCT) are expressed in the plasma membrane of epithelial cells from a wide range of tissues, where they function in the elimination of endogenous amines, cationic drugs and other xenobiotics. The structure of OCTs consists of a 12-transmembrane-domain structure and a large extracellular hydrophilic loop. In humans, OCT1 is primarily expressed in the liver, while OCT2 is expressed in the kidney. OCT3 is expressed in the placenta, skeletal muscle, prostate, aorta and liver. OCT2, also known as SLC22A2, is a multi-specific transporter protein localizing to the basolateral and luminal membranes of the kidney distal tubule and proximal tubules. OCT2 is responsible for mediating the pH-sensitive tubular uptake of organic compounds from circulation. An additional splice variant exists for OCT2, namely OCT2-A.

REFERENCES

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- Dresser, M.J., et al. 1999. Molecular and functional characteristics of clones human organic cation transporters. *Pharm. Biotechnol.* 12: 441-469.
- Verhaagh, S., et al. 1999. Cloning of the mouse and human solute carrier 22a3 (Slc22a3/SLC22A3) identifies a conserved cluster three organic cation transporters on mouse chromosome 17 and human 6q26-q27. *Genomics* 55: 209-218.
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- Fujita, T., et al. 2006. Transport of drugs in the kidney by the human organic cation transporter, OCT2 and its genetic variants. *J. Pharm. Sci.* 95: 25-36.

CHROMOSOMAL LOCATION

Genetic locus: SLC22A2 (human) mapping to 6q25.3; Slc22a2 (mouse) mapping to 17 A1.

SOURCE

OCT2 (H-62) is a rabbit polyclonal antibody raised against amino acids 290-351 mapping within an internal region of OCT2 of human origin.

PRODUCT

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

APPLICATIONS

OCT2 (H-62) is recommended for detection of OCT2 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).

OCT2 (H-62) is also recommended for detection of OCT2 in additional species, including porcine.

Suitable for use as control antibody for OCT2 siRNA (h): sc-42554, OCT2 siRNA (m): sc-42555, OCT2 shRNA Plasmid (h): sc-42554-SH, OCT2 shRNA Plasmid (m): sc-42555-SH, OCT2 shRNA (h) Lentiviral Particles: sc-42554-V and OCT2 shRNA (m) Lentiviral Particles: sc-42555-V.

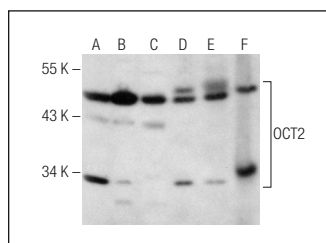
Molecular Weight of OCT2 isoforms: 63/55/27 kDa.

Positive Controls: Hep G2 whole cell lysate: sc-2227, Raji whole cell lysate: sc-364236 or Jurkat whole cell lysate: sc-2204.

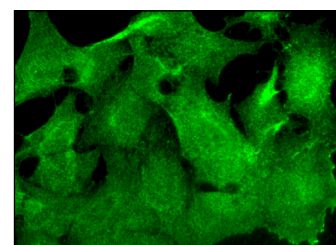
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



OCT2 (H-62): sc-292622. Western blot analysis of OCT2 expression in Hep G2 (A), Raji (B) and Jurkat (C) whole cell lysates and human liver (D), human kidney (E) and rat kidney (F) tissue extracts.



OCT2 (H-62): sc-292622. Immunofluorescence staining of formalin-fixed HepG2 cells showing membrane localization.

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.