

OCT1 (X-21): sc-133866

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. OCT3, also known as extraneuronal monoamine transporter, is widely expressed in different regions of the brain including the hippocampus, cerebellum and cerebral cortex. OCT3 mediates the uptake of several neuroactive agents, including dopamine, and may play an important role in the disposition of neurotransmitters and cationic neurotoxins in the brain.

REFERENCES

- Gorboulev, V., et al. 1997. Cloning and characterization of two human polyspecific organic cation transporters. *DNA Cell Biol.* 16: 871-881.
- Koepsell, H. 1998. Organic cation transporters in intestine, kidney, liver, and brain. *Annu. Rev. Physiol.* 60: 246-266.

CHROMOSOMAL LOCATION

Genetic locus: SLC22A1 (human) mapping to 6q25.3; Slc22a1 (mouse) mapping to 17 A1.

SOURCE

OCT1 (X-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic OCT1 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

OCT1 (X-21) is recommended for detection of OCT1 of mouse, rat, human and canine 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

OCT1 (X-21) is also recommended for detection of OCT1 in additional species, including canine.

Suitable for use as control antibody for OCT1 siRNA (h): sc-42552, OCT1 siRNA (m): sc-42553, OCT1 shRNA Plasmid (h): sc-42552-SH, OCT1 shRNA Plasmid (m): sc-42553-SH, OCT1 shRNA (h) Lentiviral Particles: sc-42552-V and OCT1 shRNA (m) Lentiviral Particles: sc-42553-V.

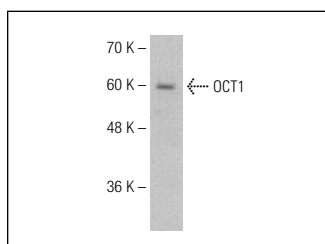
Molecular Weight of OCT1: 61 kDa.

Positive Controls: 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



OCT1 (X-21): sc-133866. Western blot analysis of OCT1 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

- Li, Q., et al. 2013. Ischemia/reperfusion-inducible protein modulates the function of organic cation transporter 1 and multidrug and toxin extrusion 1. *Mol. Pharm.* 10: 2578-2587.

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.



Try **OCT1 (2C5): sc-293181**, our highly recommended monoclonal alternative to OCT1 (X-21).