SANTA CRUZ BIOTECHNOLOGY, INC.

OCT3 (M-15): sc-19818

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

1. Gorboulev, V., et al. 1997. Cloning and characterization of two human polyspecific organic cation transporters. DNA Cell Biol. 16: 871-881.
2. Koepsell, H. 1998. Organic cation transporters in intestine, kidney, liver, and brain. Annu. Rev. Physiol. 60: 246-266.
3. Wu, X., et al. 1998. Identity of the organic cation transporter OCT3 as the extraneuronal monoamine transporter (uptake2) and evidence for the expression of the transporter in the brain. J. Biol. Chem. 273: 32776-32786.
4. Dresser, M.J., et al. 1999. Molecular and functional characteristics of clones human organic cation transporters. Pharm. Biotechnol. 12: 441-469.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: SLC22A3 (human) mapping to 6q25.3; Slc22a3 (mouse) mapping to 17 A1.

SOURCE

OCT3 (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of OCT3 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-19818 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.

RESEARCH USE

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

APPLICATIONS

OCT3 (M-15) is recommended for detection of OCT3 of mouse, rat and, to a lesser extent, human 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), 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).

Suitable for use as control antibody for OCT3 siRNA (h): sc-42556, OCT3 siRNA (m): sc-42557, OCT3 shRNA Plasmid (h): sc-42556-SH, OCT3 shRNA Plasmid (m): sc-42557-SH, OCT3 shRNA (h) Lentiviral Particles: sc-42556-V and OCT3 shRNA (m) Lentiviral Particles: sc-42557-V.

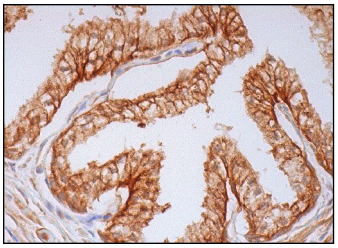
Molecular Weight of (predicted) OCT3: 61 kDa.

Molecular Weight of (observed) OCT3: 81 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



OCT3 (M-15): sc-19818. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane staining of glandular cells.

PROTOCOLS

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