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Anti-SLC22A2 Antibody

Catalog # AP52001

Product Information

Application	WB
Primary Accession	O15244
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	62581

Additional Information

Gene ID	6582
Other Names	OCT2; Solute carrier family 22 member 2; Organic cation transporter 2; hOCT2
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human SLC22A2. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

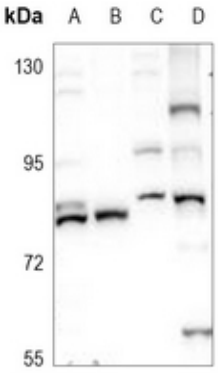
Name	SLC22A2 (HGNC:10966)
Synonyms	OCT2
Function	Electrogenic voltage-dependent uniporter that mediates the transport of a variety of organic cations such as endogenous bioactive amines, cationic drugs and xenobiotics (PubMed:9260930, PubMed:9687576). Functions as a Na(+)-independent, bidirectional uniporter (PubMed:21128598, PubMed:9687576). Cation cellular uptake or release is driven by the electrochemical potential, i.e. membrane potential and concentration gradient (PubMed:15212162, PubMed:9260930, PubMed:9687576). However, may also engage electroneutral cation exchange when saturating concentrations of cation substrates are reached (By similarity). Predominantly expressed at the basolateral membrane of hepatocytes and proximal tubules and involved in the uptake and disposition of cationic compounds by hepatic and renal clearance from the blood flow (PubMed:15783073). Implicated in monoamine neurotransmitters uptake such as histamine, dopamine, adrenaline/epinephrine, noradrenaline/norepinephrine, serotonin and

	tyramine, thereby supporting a physiological role in the central nervous system by regulating interstitial concentrations of neurotransmitters (PubMed:16581093, PubMed:17460754, PubMed:9687576). Also capable of transporting dopaminergic neuromodulators cyclo(his- pro), salsolinol and N-methyl-salsolinol, thereby involved in the maintenance of dopaminergic cell integrity in the central nervous system (PubMed:17460754). Mediates the bidirectional transport of acetylcholine (ACh) at the apical membrane of ciliated cell in airway epithelium, thereby playing a role in luminal release of ACh from bronchial epithelium (PubMed:15817714). Also transports guanidine and endogenous monoamines such as vitamin B1/thiamine, creatinine and N-1- methylnicotinamide (NMN) (PubMed:12089365, PubMed:15212162, PubMed:17072098, PubMed:24961373, PubMed:9260930). Mediates the uptake and efflux of choline (PubMed:9260930). Mediates the bidirectional transport of polyamine agmatine and the uptake of polyamines putrescine and spermidine (PubMed:12538837, PubMed:21128598). Able to transport non-amine endogenous compounds such as prostaglandin E2 (PGE2) and prostaglandin F2-alpha (PGF2-alpha) (PubMed:11907186). Also involved in the uptake of xenobiotic 4-(4-(dimethylamino)styryl)-N-methylpyridinium (ASP) (PubMed:12395288, PubMed:16394027). May contribute to regulate the transport of organic compounds in testis across the blood-testis- barrier (Probable).
Cellular Location	Basolateral cell membrane {ECO:0000250|UniProtKB:Q9R0W2}; Multi-pass membrane protein. Basal cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Note=Localized to the basal membrane of Sertoli cells (PubMed:35307651). Localized to the basolateral membrane of proximal tubule (PubMed:11912245). Localized to the luminal/apical membrane of distal tubule (PubMed:9260930). Localized to the luminal/apical membrane of ciliated epithelial cells in bronchi (PubMed:15817714).
Tissue Location	Mainly expressed in kidney, in the cortex and medulla (PubMed:11912245, PubMed:12089365, PubMed:9260930). Localized in testis, mostly to peritubular myoid cells and Leydig cells and also detected along the basal membrane of Sertoli cells (PubMed:12089365, PubMed:35307651). Expressed in brain, in neurons of the cerebral cortex and in various subcortical nuclei (PubMed:12089365, PubMed:9260930, PubMed:9687576). In the brain, also detected in the dopaminergic regions of the substantia nigra (PubMed:17460754). Expressed in tracheal and bronchial ciliated epithelium in the respiratory tract (PubMed:15817714). Also detected in secretory phase endometrium, in scattered stromal cells (PubMed:17393420). Expressed in spleen, placenta, small intestine and spinal cord (PubMed:12089365, PubMed:9260930). Weakly expressed in prostate, uterus and lung (PubMed:12089365).

References

Gorboulev V.,et al.DNA Cell Biol. 16:871-881(1997).
Urakami Y.,et al.J. Am. Soc. Nephrol. 13:1703-1710(2002).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mungall A.J.,et al.Nature 425:805-811(2003).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images



Western blot analysis of SLC22A2 expression in U87MG (A), A2780 (B), C6 (C), BV2 (D) whole cell lysates.
(Predicted band size: 62 kD; Observed band size: 80 kD)

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