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OAT1 Polyclonal Antibody

Catalog # AP73567

Product Information

Application	WB
Primary Accession	Q4U2R8
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	61816

Additional Information

Gene ID	9356
Other Names	SLC22A6; OAT1; PAHT; Solute carrier family 22 member 6; Organic anion transporter 1; hOAT1; PAH transporter; hPAHT; Renal organic anion transporter 1; hROAT1
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/20000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

Name	SLC22A6 (HGNC:10970)
Synonyms	OAT1, PAHT
Function	Secondary active transporter that functions as a Na(+)- independent organic anion (OA)/dicarboxylate antiporter where the uptake of one molecule of OA into the cell is coupled with an efflux of one molecule of intracellular dicarboxylate such as 2-oxoglutarate or glutarate (PubMed:11669456, PubMed:11907186, PubMed:14675047, PubMed:22108572, PubMed:23832370, PubMed:28534121, PubMed:9950961). Mediates the uptake of OA across the basolateral side of proximal tubule epithelial cells, thereby contributing to the renal elimination of endogenous OA from the systemic circulation into the urine (PubMed:9887087). Functions as a biopterin transporters involved in the uptake and the secretion of coenzymes tetrahydrobiopterin (BH4), dihydrobiopterin (BH2) and sepiapterin to urine, thereby determining baseline levels of blood biopterins (PubMed:28534121). Transports prostaglandin E2 (PGE2) and prostaglandin F2-alpha (PGF2-alpha) and may contribute to their renal excretion (PubMed:11907186). Also

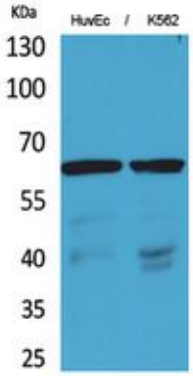
	mediates the uptake of cyclic nucleotides such as cAMP and cGMP (PubMed:26377792). Involved in the transport of neuroactive tryptophan metabolites kynurenate (KYNA) and xanthurenate (XA) and may contribute to their secretion from the brain (PubMed:22108572, PubMed:23832370). May transport glutamate (PubMed:26377792). Also involved in the disposition of uremic toxins and potentially toxic xenobiotics by the renal organic anion secretory pathway, helping reduce their undesired toxicological effects on the body (PubMed:11669456, PubMed:14675047). Uremic toxins include the indoxyl sulfate (IS), hippurate/N- benzoylglycine (HA), indole acetate (IA), 3-carboxy-4- methyl-5-propyl- 2-furanpropionate (CMPF) and urate (PubMed:14675047, PubMed:26377792). Xenobiotics include the mycotoxin ochratoxin (OTA) (PubMed:11669456). May also contribute to the transport of organic compounds in testes across the blood-testis-barrier (PubMed:35307651).
Cellular Location	Basolateral cell membrane; Multi-pass membrane protein. Basal cell membrane; Multi-pass membrane protein. Note=Localized to the basolateral membrane of renal proximal tubular cells (PubMed:9887087) Localized to the basal membrane of Sertoli cells (PubMed:35307651)
Tissue Location	Strongly expressed in kidney (PubMed:10049739, PubMed:10462545, PubMed:10964714, PubMed:9887087, PubMed:9950961) Expressed at lower level in liver, skeletal muscle, brain and placenta (PubMed:10049739, PubMed:10462545, PubMed:9887087, PubMed:9950961). In kidney, found at the basolateral membrane of the proximal tubule (PubMed:9887087). In testis, primarily localized to the basal membrane of Sertoli cells and weakly expressed in Leydig cells and vascular endothelial cells (PubMed:35307651).

Background

Involved in the renal elimination of endogenous and exogenous organic anions. Functions as organic anion exchanger when the uptake of one molecule of organic anion is coupled with an efflux of one molecule of endogenous dicarboxylic acid (glutarate, ketoglutarate, etc). Mediates the sodium-independent uptake of 2,3-dimercapto-1-propanesulfonic acid (DMPS) (By similarity). Mediates the sodium-independent uptake of p- aminohippurate (PAH), ochratoxin (OTA), acyclovir (ACV), 3'-azido- 3-'deoxythymidine (AZT), cimetidine (CMD), 2,4-dichloro- phenoxyacetate (2,4-D), hippurate (HA), indoleacetate (IA), indoxyl sulfate (IS) and 3-carboxy-4-methyl-5-propyl-2- furanpropionate (CMPF), cidofovir, adefovir, 9-(2- phosphonylmethoxyethyl) guanine (PMEG), 9-(2- phosphonylmethoxyethyl) diaminopurine (PMEDAP) and edaravone sulfate. PAH uptake is inhibited by p- chloromercuribenzenesulphonate (PCMBS), diethyl pyrocarbonate (DEPC), sulindac, diclofenac, carprofen, glutarate and okadaic acid (By similarity). PAH uptake is inhibited by benzothiazolylcysteine (BTC), S-chlorotrifluoroethylcysteine (CTFC), cysteine S-conjugates S-dichlorovinylcysteine (DCVC), furosemide, steviol, phorbol 12-myristate 13-acetate (PMA), calcium ionophore A23187, benzylpenicillin, furosemide, indomethacin, bumetamide, losartan, probenecid, phenol red, urate, and alpha-ketoglutarate.

Images

Western Blot analysis of HuvEc, K562 cells using OAT1 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



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