Supplementary data

Potential drug interactions mediated by renal organic anion transporter OATP4C1

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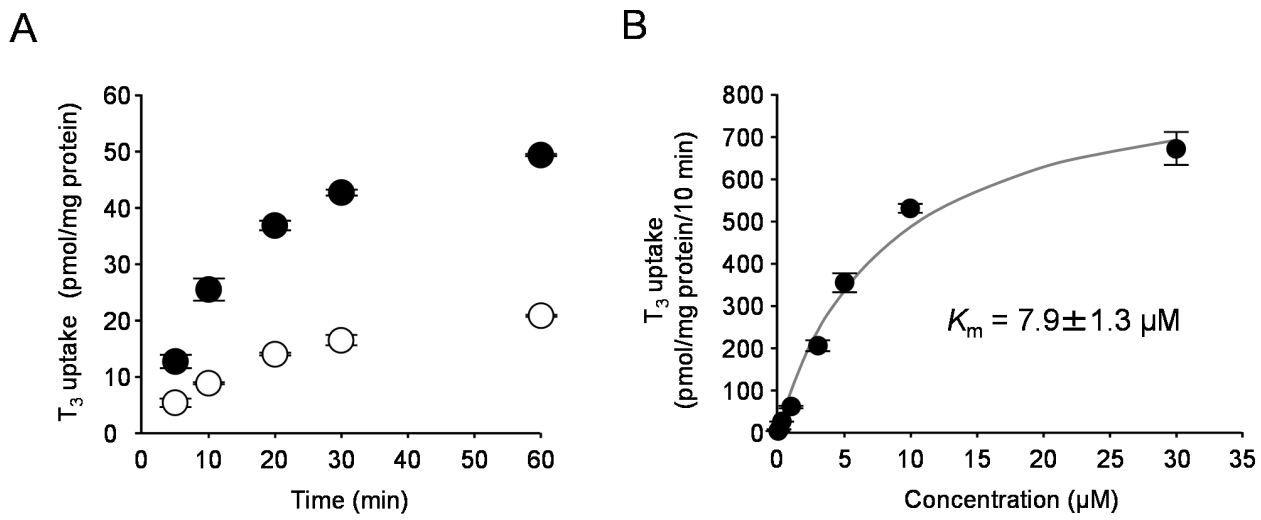

Supplementary Figure S1. (A) Time course and (B) kinetics of T_3 uptake by OATP4C1-expressing MDCKII cells. After addition of T_3 to cells, samples were harvested at the indicated time to monitor the level of T_3 uptake. (A) Comparison of the relative uptake of T_3 into mock cells (open circle) and OATP4C1-expressing MDCKII cells (closed circle) in the presence of 5 mM sodium butyrate. (B) Evaluation of the concentration-dependent uptake of T_3 by OATP4C1-expressing MDCKII cells. OATP4C1-mediated transport was calculated after by taking the total cellular uptake by OATP4C1-expressing cells and subtracting nonspecific uptake by mock cells. Results are expressed as the mean ± S.E. (n = 3).

Supplementary Table S1. IC_{50} values of OATP4C1 and other drug transporters in the liver and kidney.

	IC_{50} or *K*i (μM) or inhibition (Yes (% inhibition, etc.) / No)									
Inhibitors	OATP4C1	OATP1B1	OATP1B3	OAT1	OAT3	OCT2	MATE1	MATE2-K	P-gp	BCRP
Clarithromycin	204 ± 16	5.3 ± 1.3[1)] 8.26 ± 0.54[2)]* 46.0 ± 2.27[3)] 96 ± 5[4)]	14 ± 2[1)] 9.5 ± 3.5[2)] 32 ± 7[3)]	> 50[1)]	> 50[1)]	> 50[1)]	> 50[1)]	> 50[1)]	8.9 ± 0.5[1)]	> 50[1)]
Crizotinib	24 ± 8	> 50[5)]	> 50[5)]	-	-	-	-	-	Yes[6)]	-
Fluvastatin	41 ± 8	-	-	26.3 ± 4.63[7)]	5.79 ± 0.64[7)]	-	-	-	No[8)]	5.43 ± 0.27[9)]
Levofloxacin	419 ± 148	-	-	Yes (weak, 100 μM)[10)]	Yes (weak, 100 μM)[10)]	Yes (70%, 5 mM)[11)]	38.2 ± 11.8[12)]	81.7 ± 23.1[12)]	-	-
Nicardipine	51 ± 8	-	-	-	-	-	-	-	4.54[13)] 17.5[14)]	4.8 ± 1.3[15)]
Quinidine	100 ± 11	-	-	-	Yes (25%, 1 mM)[16)]	19.1[17)]*	Yes (53%, 10 μM)[18)]	-	14.1[19)]	-
Ritonavir	8.5 ± 1.4	0.68 ± 0.17[1)] 0.781 ± 0.048[2)]* 0.5 ± 0.4[20)] 1.6 ± 0.3[21)]	2.3 ± 0.4[1)] > 100[20)] 3.6 ± 1.1[21)]	17 ± 3[1)]	> 30[1)]	> 30[1)] 25 ± 7[22)] ~20[23)]	1.2 ± 0.2[1)] 1.34 ± 0.23[23)]	15 ± 2[1)] > 20[23)]	0.24 ± 0.02[1)]	6.6 ± 0.5[1)] 19.5 ± 0.8[24)]
Saquinavir	4.3 ± 0.6	1.59 ± 0.13[2)]* 2.1 ± 1.2[21)] 0.41 ± 0.16[25)]	4.1 ± 1.0[21)] 0.47 ± 0.13[25)]	-	-	205 ± 29[22)] Yes[26)]	-	-	Yes[26)]	19.5 ± 7.6[24)] Yes[26)] 27.4[27)]
Sqironolactone	53 ± 6.7	-	-	-	-	-	-	-	-	-
Verapamil	110 ± 22	51.6 ± 15.9[28)]	89.5 ± 52.9[28)]	-	No[16)]	70[29)]	Yes (75%, 100 μM)[18)]	-	5.9[19)]	Yes[30)] / No[31)]

IC_{50} values of OATP4C1 are expressed as mean ± S.E. Data for IC_{50} and *K*i values of the drugs are obtained from previous reports. Asterisk indicates a *K*i value instead of an IC_{50} value. Yes, the drug inhibited the transporter-mediated substrate uptake (inhibition degree, concentration of the drug (if available)); No, no inhibition was observed; -, no data available.

References of Supplementary Table S1

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