

SLC21/SLCO – The organic anion transporting family

New gene symbol ¹⁾	New protein name	Old gene symbol	Old protein names	Predominant substrates	Tissue distribution and cellular / subcellular expression	Link to disease	Human gene locus	Sequence Accession ID	Splice variants and their features
SLCO1A2	OATP1A2	SLC21A3	OATP-A, OATP	bile salts, organic anions, organic cations	brain (endothelial cells), kidney, liver, ciliary body		12p12	NM_021094 NM_134431	2 splice variants
SLCO1B1	OATP1B1	SLC21A6	OATP-C, LST-1, OATP2	bile salts, organic anions	liver	(statin-induced myopathy)	12p	NM_006446	
SLCO1B3	OATP1B3	SLC21A8	OATP8	bile salts, organic anions, digoxin (C / glutathione)	liver, cancer cell lines	(unconjugated hyperbilirubinemia)	12p12	NM_019844	
SLCO1C1	OATP1C1	SLC21A14	OATP-F, OATP-RP5	T4, T3, rT3, BSP	brain (blood-brain barrier), testis (Leydig cells), intestine, kidney	(hyperthyroidism)	12p12.2	NM_017435	
SLCO2A1	OATP2A1	SLC21A2	PGT	Prostaglandin (C / lactate)	ubiquitous		3q21	NM_005630	
SLCO2B1	OATP2B1	SLC21A9	OATP-B, OATP-RP2	E-3-S, DHEAS, BSP	liver, placenta, ciliary body, intestine		11q13	NM_007256 NM_001145212	3 splice variants
SLCO3A1	OATP3A1	SLC21A11	OATP-D, OATP-RP3	E-3-S, prostaglandin	testis, heart, brain, ovary		15q26	NM_013272 NM_001145044	2 splice variants
SLCO4A1	OATP4A1	SLC21A12	OATP-E, OATP-RP1	taurocholate, T3, prostaglandin	ubiquitous		20q13.33	NM_016354	
SLCO4C1	OATP4C1	SLC21A20	OATP-H, OATP-X, OATP-M1	digoxin, ouabain, thyroid hormone, methotrexate	kidney (basolateral)		5q21.2	NM_180991	
SLCO5A1	OATP5A1	SLC21A15	OATP-J, OATP-RP4	O			8q13.3	NM_030958	
SLCO6A1	OATP6A1	SLC21A19	OATP-I, GST	O	testis		5q21.1	NM_173488	

1) In addition, there are the following rodent-specific genes: Slco1a1, Slco1a3, Slco1a4, Slco1a5, Slco1a6, Slco1b2, Slco6b1, Slco6c1 and Slco6d1.

References:

Original version of the SLC table:

[Hagenbuch B, Meier PJ.](#) Organic anion transporting polypeptides of the OATP / SLC21 family: phylogenetic classification as OATP/ SLCO superfamily, new nomenclature and molecular/functional properties. *Pflugers Arch.* 2004 Feb;447(5):653-65.

Questions & Comments