

SLC17 – Vesicular glutamate transporter family

Human gene name	Protein name	Aliases	Predominant substrates	Transport type /coupling ions ¹⁾	Tissue distribution and cellular/subcellular expression	Link to disease ^{#)}	Human gene locus	Sequence accession ID	Splice variants and their features
SLC17A1	NPT1, NPT-1, NAPI-1, MGC126796, MGC126794	NaPi1	organic acids, phosphate, chloride	unknown, Na ⁺ channel	kidney, liver	gout development	6p23-p21.3	NM_005074	
SLC17A2	NPT3, MGC138238		unknown		heart, muscle, brain, placenta, lung, liver, kidney, pancreas		6p21.3	NM_005835	
SLC17A3	NPT4		unknown		liver, kidney, small intestine, testis		6p21.3	NM_006632	
SLC17A4	Na ⁺ /PO ₄ ³⁻ cotransporter homolog, KIAA2138, KIAA2138, MGC129623		unknown		small intestine, colon, liver, pancreas		6p22-p21.3	NM_005495	
SLC17A5	sialin	AST, NSD, ISSD, SIASD, SIALIN, FLJ22227, FLJ23268	sialic acid	C / H ⁺	heart, brain, liver, lung, pancreas, placenta, muscle, uterus, bladder, kidney, spleen.	sialic acid storage disease (Salla disease) ^G	6q14-q15	NM_012434	
SLC17A6	VGLUT2	DNPI	glutamate	E / H ⁺	brain (neurons only), endocrine		11p14.3	NM_020346	
SLC17A7	VGLUT1	BNPI	glutamate	E / H ⁺	brain (neurons only), endocrine		19q13	NM_020309	
SLC17A8	VGLUT3	PFNA25	glutamate	E / H ⁺	brain (neurons and glia), liver, kidney		12q23.1	NM_139319	

*) C: Cotransporter; E: Exchanger; F: Facilitated transporter; O: Orphan transporter

References:

Original version of the SLC table:

[Reimer RJ, Edwards RH.](#) Organic anion transport is the primary function of the SLC17/type I phosphate transporter family. *Pflugers Arch.* 2004 Feb;447(5):629-35.

Questions & Comments