ESM_2: Membrane-traversing mechanism of thyroid hormone transport by monocarboxylate transporter 8
Cellular and Molecular Life Sciences
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Location, conservation and corresponding residues in MCT10 of the substituted amino acids in MCT8

Location in Modell	Residues in MCT8	Conservation in MCT8	Corresponding residues in human MCT10	Remarks
TMH 5	S313	100%	S210	
TMH 5	S314	93%	S211	
ICL3	R388	100%	A286	inconclusive since intracellular loop strongly differs
TMH7b	K418	98%	K316	
TMH7b	Y419	99%	H317	might contribute to the different substrate spectra of MCT8 and MCT10 (Johannes *et al.*, 2016)
TMH7b	E422	91%	E320	
TMH7b	E423	92%	R321	both capable of interacting with amino acid moiety of substrate
TMH10b	T503	100%	S401	similar physical and chemical properties

To calculate conservation of the residues, the 100 closest orthologs to human MCT8 were identified via a Blast search and subsequently a multiple sequence alignment was generated with CulstalW2. Scores were calculated with ClustalX2 utilizing the residue identity.