Abstract

The SLC22 family of transporters is mostly composed of non-selective transporters, which are expressed highly in liver, kidney and intestine, playing a major role in drug disposition. The family may be divided into three subfamilies based on the nature of the substrate transported: organic cations (OCTs), organic anions (OATs) and organic zwitterions/cations (OCTN). Membrane topology is predicted to contain 12 TM domains with intracellular termini, and an extended extracellular loop at TM 1/2.

Contents

This is a citation summary for SLC22 family of organic cation and anion transporters in the Guide to Pharmacology database (GtoPdb). It exists purely as an adjunct to the database to facilitate the recognition of citations to and from the database by citation analyzers. Readers will almost certainly want to visit the relevant sections of the database which are given here under database links.

GtoPdb is an expert-driven guide to pharmacological targets and the substances that act on them. GtoPdb is a reference work which is most usefully represented as an on-line database. As in any publication this work should be appropriately cited, and the papers it cites should also be recognized. This document provides a citation for the relevant parts of the database, and also provides a reference list for the research cited by those parts. For further details see [3].

Please note that the database version for the citations given in GtoPdb are to the most recent preceding version in which the family or its subfamilies and targets were substantially changed. The links below are to the current version. If you need to consult the cited version, rather than the most recent version, please contact the GtoPdb curators.

Database links

SLC22 family of organic cation and anion transporters
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=146

Organic cation transporters (OCT)
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=196

Transporters

OCT1(Organic cation transporter 1)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1019

OCT2(Organic cation transporter 2)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1020

OCT3(Organic cation transporter 3)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1021

Organic zwitterions/cation transporters (OCTN)
Transporters

OCTN1 (Organic cation/carnitine transporter 1)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1022
OCTN2 (Organic cation/carnitine transporter 2)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1023
CT2 (Carnitine transporter 2)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1024

Organic anion transporters (OATs)
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=198

Transporters

OAT1 (Organic anion transporter 1)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1025
OAT2 (Organic anion transporter 2)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1026
OAT3 (Organic anion transporter 3)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1027
Organic anion transporter 4
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1030
OAT4 (Organic anion transporter 7)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1028

Urate transporter
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=199

Transporters

URAT1 (Urate anion exchanger 1)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1031

Orphan or poorly characterized SLC22 family members
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=200

Transporters

OAT10 (Organic anion transporter 10)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1032
OCTL2 (Organic cation transporter-like 2)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1033
FLIPT1 (Fly-like putative transporter 1)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1034
BOIT (Brain-type organic cation transporter)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1035
OAT5 (Organic anion transporter 5)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1029
ORCTL2 (Organic cation transporter-like 2)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1036
OAT6
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1037
SLC22A23
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1038
SLC22A24
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1039
UST6
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1040
solute carrier family 22 member 31
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2557

Atypical SLC22B subfamily
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=859

Transporters

synaptic vesicle glycoprotein 2A
References


(SLC22A3) and amphetamine. *J Neurochem* **114**: 142-9 [PMID:20402963]