

SLC22 family of organic cation and anion transporters in GtoPdb v.2023.1

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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 zwitterion/cations (OCTN). Membrane topology is predicted to contain 12 TM domains with intracellular termini, and an extended extracellular loop at TM 1/2.

Contents

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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 \(OCTN\)](#)

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=197>

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](#)

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