

SLC25 family of mitochondrial transporters in GtoPdb v.2023.1

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Abstract

Mitochondrial carriers are nuclear-encoded proteins, which translocate solutes across the inner mitochondrial membrane. Mitochondrial carriers are functional as monomers and have six TM alpha-helices and the termini in the mitochondrial intermembrane space.

Contents

This is a citation summary for SLC25 family of mitochondrial 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 [1].

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

[SLC25 family of mitochondrial transporters](#)

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=147>

[Mitochondrial di- and tri-carboxylic acid transporter subfamily](#)

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=203>

Transporters

[CIC\(Mitochondrial citrate transporter\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1051>

[DIC\(Mitochondrial dicarboxylate transporter\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1052>

[OGC\(Mitochondrial oxoglutarate carrier\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1053>

[ODC\(Mitochondrial oxodicarboxylate carrier\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1057>

[SLC25A34](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1085>

SLC25A35

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1086>

Mitochondrial amino acid transporter subfamily

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=204>

Transporters

solute carrier family 25 member 47

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2558>

solute carrier family 25 member 48

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2559>

AGC1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1054>

AGC2

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1055>

GC2(Mitochondrial glutamate carrier 2)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1056>

GC1(Mitochondrial glutamate carrier 1)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1058>

ORC2(Mitochondrial ornithine transporter 2)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1059>

ORC1(Mitochondrial ornithine transporter 1)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1060>

CAC(Carnitine/acylcarnitine carrier)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1076>

ORNT3

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1081>

SLC25A38

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1089>

CGI-69

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1090>

MCFP

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1091>

SLC25A44

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1094>

SLC25A45

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1095>

Mitochondrial phosphate transporters

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=205>

Transporters

PHC(Mitochondrial phosphate carrier)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1061>

Mitochondrial nucleotide transporter subfamily

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=206>

Transporters

ANT1(Mitochondrial adenine nucleotide translocator 1)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1062>

ANT2(Mitochondrial adenine nucleotide translocator 2)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1063>

ANT3(Mitochondrial adenine nucleotide translocator 3)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1064>

ANT4(Mitochondrial adenine nucleotide translocator 4)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1065>

GDC(Graves disease carrier)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1071>

PMP34(Peroxisomal membrane protein)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1072>

DNC(Deoxynucleotide carrier 1)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1073>

SAMC1(S-Adenosylmethionine carrier)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1074>

SLC25A42

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1075>

APC1(Mitochondrial phosphate carrier 1)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1077>

APC2(Mitochondrial phosphate carrier 2)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1078>

APC3(Mitochondrial phosphate carrier 3)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1079>

MFTC(MFT)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1083>

PNC1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1084>

PNC2(SLC25A36)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1087>

SCaMC-3L

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1092>

SLC25A43

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1093>

Mitochondrial uncoupling proteins

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=207>

Transporters

UCP1(Uncoupling protein 1)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1066>

UCP2(Uncoupling protein 2)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1067>

UCP3(Uncoupling protein 3)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1068>

UCP4(Uncoupling protein 4)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1069>

UCP5(Uncoupling protein 5)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1070>

KMCP1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1082>

Miscellaneous SLC25 mitochondrial transporters

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=209>

Transporters

mitochondrial carrier 1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2554>

mitochondrial carrier 2

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2555>

solute carrier family 25 member 51

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2560>

solute carrier family 25 member 52

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2561>

solute carrier family 25 member 53

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2562>

Mitoferrin2

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1080>

Mitoferrin1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1088>

SLC25A46

References

1. Buneman P, Christie G, Davies JA, Dimitrellou R, Harding SD, Pawson AJ, Sharman JL and Wu Y. (2020) Why data citation isn't working, and what to do about it *Database* **2020** [PMID:32367113]
2. Fiermonte G, Dolce V, David L, Santorelli FM, Dionisi-Vici C, Palmieri F and Walker JE. (2003) The mitochondrial ornithine transporter. Bacterial expression, reconstitution, functional characterization, and tissue distribution of two human isoforms. *J Biol Chem* **278**: 32778-83 [PMID:12807890]
3. Fiermonte G, Paradies E, Todisco S, Marobbio CM and Palmieri F. (2009) A novel member of solute carrier family 25 (SLC25A42) is a transporter of coenzyme A and adenosine 3',5'-diphosphate in human mitochondria. *J Biol Chem* **284**: 18152-9 [PMID:19429682]