SLC36 family of proton-coupled amino acid transporters (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database

Catriona M.H. Anderson¹ and David T. Thwaites¹

¹Newcastle University, UK

Abstract

Members of the SLC36 family of proton-coupled amino acid transporters are involved in membrane transport of amino acids and derivatives. The four transporters show variable tissue expression patterns and are expressed in various cell types at the plasma-membrane and in intracellular organelles. PAT1 is expressed at the luminal surface of the small intestine and absorbs amino acids and derivatives [3]. In lysosomes, PAT1 functions as an efflux mechanism for amino acids produced during intralysosomal proteolysis [2, 15]. PAT2 is expressed at the apical membrane of the renal proximal tubule [5] and at the plasma-membrane in brown/beige adipocytes [17]. PAT1 and PAT4 are involved in regulation of the mTORC1 pathway [8]. More comprehensive lists of substrates can be found within the reviews under Further Reading and in the references.

Contents

This is a citation summary for SLC36 family of proton-coupled amino acid 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.

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

SLC36 family of proton-coupled amino acid transporters
http://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=223

Transporters
PAT1(Proton-coupled Amino acid Transporter 1)
http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1161
PAT2 (Proton-coupled Amino acid Transporter 2)
http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1162

PAT3 (Proton-coupled Amino acid Transporter 3)
http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1163

PAT4 (Proton-coupled Amino acid Transporter 4)
http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1164

References


