

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

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### 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 [7]. 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

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[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>

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