

SLC36 family of proton-coupled amino acid transporters in GtoPdb v.2025.3

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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 [31, 32]. 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 [4]. In lysosomes, PAT1 functions as an efflux mechanism for amino acids produced during intralysosomal proteolysis [2, 28]. PAT2 is expressed at the apical membrane of the renal proximal tubule [7] and at the plasma-membrane in brown/beige adipocytes [33]. PAT1 and PAT4 are involved in regulation of the mTORC1 pathway [12, 30]. More comprehensive lists of substrates can be found within the reviews under Further Reading and in the references [3].

Contents

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Database links

SLC36 family of proton-coupled amino acid transporters

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=223>

Transporters

[PAT1\(Proton-coupled Amino acid Transporter 1\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1161>

[PAT2\(Proton-coupled Amino acid Transporter 2\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1162>

[PAT3\(Proton-coupled Amino acid Transporter 3\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1163>

[PAT4\(Proton-coupled Amino acid Transporter 4\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1164>

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