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SLC15 family of peptide transporters in GtoPdb v.2025.3

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Abstract

The Solute Carrier 15 (SLC15) family of peptide transporters, alias H^+-coupled oligopeptide cotransporter family, is a group of membrane transporters known for their key role in the cellular uptake of di- and tripeptides (di/tripeptides). Of its members, SLC15A1 (PEPT1) chiefly mediates intestinal absorption of luminal di/tripeptides from overall dietary protein digestion, SLC15A2 (PEPT2) mainly allows renal tubular reuptake of di/tripeptides from ultrafiltration and brain-to-blood efflux of di/tripeptides in the choroid plexus, SLC15A3 (PHT2) and SLC15A4 (PHT1) interact with both di/tripeptides and histidine, e.g. in certain immune cells, and SLC15A5 has unknown physiological function. In addition, the SLC15 family of peptide transporters variably interacts with a very large number of peptidomimetics and peptide-like drugs. It is conceivable, based on the currently acknowledged structural and functional differences, to divide the SLC15 family of peptide transporters into two subfamilies [3].

Contents

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SLC15 family of peptide transporters
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=187

Transporters

- PEPT1(Peptide transporter 1)
  https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=984
- PEPT2(Peptide transporter 2)
  https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=985
- PHT2(Peptide transporter 3)
  https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=986
- PHT1(Peptide transporter 4)
  https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=987

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