IUPHAR/BPS Guide to Pharmacology CITE
https://doi.org/10.2218/gtopdb/F337/2023.1

SLC51 family of steroid-derived molecule transporters in GtoPdb v.2023.1

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Abstract

The SLC51 organic solute transporter family of transporters is a pair of heterodimeric proteins which regulate bile salt movements in the small intestine, bile duct, and liver, as part of the enterohepatic circulation [2, 5, 1]. OSTα/OSTβ is also expressed in steroidogenic cells of the brain and adrenal gland, where it may contribute to steroid sulphate movement [6]. Bile acid and steroid sulphate transport is suggested to be facilitative and independent of sodium, potassium, chloride ions or protons [5, 2]. OSTα/OSTβ heterodimers have been shown to transport [^{3}H]taurocholic acid, [^{3}H]dehydroepiandrosterone sulphate, [^{3}H]estrone-3-sulphate, [^{3}H]pregnenolone sulphate and [^{3}H]dehydroepiandrosterone sulphate[2, 5, 6]. OSTα/OSTβ-mediated transport is inhibited by clofazimine and fidaxomicin [9, 11]. OSTα is suggested to be a seven TM protein, while OSTβ is a single TM 'ancillary' protein, both of which are thought to have intracellular C-termini [8]. Both proteins function in solute transport [8, 4]. Inherited mutations in OSTα and OSTβ are associated with liver disease and congenital diarrhea in children [10, 7].

Contents

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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

SLC51 family of steroid-derived molecule transporters
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=337

Transporters

OSTα(Organic solute transporter subunit α)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1915

OSTβ(Organic solute transporter subunit β)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1916

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