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SLC51 family of steroid-derived molecule transporters in GtoPdb v.2021.3

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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 movement [6]. Bile acid 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 of bile salts is inhibited by clofazimine [10]. 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 [9, 7].

Contents

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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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