

## SLC14 family of facilitative urea transporters (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database

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### Abstract

As a product of protein catabolism, urea is moved around the body and through the kidneys for excretion. Although there is experimental evidence for concentrative urea transporters, these have not been defined at the molecular level. The SLC14 family are facilitative transporters, allowing **urea** movement down its concentration gradient. Multiple splice variants of these transporters have been identified; for UT-A transporters, in particular, there is evidence for cell-specific expression of these variants with functional impact [3]. Topographical modelling suggests that the majority of the variants of SLC14 transporters have 10 TM domains, with a glycosylated extracellular loop at TM5/6, and intracellular C- and N-termini. The UT-A1 splice variant, exceptionally, has 20 TM domains, equivalent to a combination of the UT-A2 and UT-A3 splice variants.

### 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

[SLC14 family of facilitative urea transporters](#)

<http://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=186>

Transporters

[UT-B\(Erythrocyte urea transporter\)](#)

<http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=982>

## References

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2. Maciver B, Smith CP, Hill WG and Zeidel ML. (2008) Functional characterization of mouse urea transporters UT-A2 and UT-A3 expressed in purified *Xenopus laevis* oocyte plasma membranes. *Am. J. Physiol. Renal Physiol.* **294**: F956-64 [PMID:18256317]
3. Stewart G. (2011) The emerging physiological roles of the SLC14A family of urea transporters. *Br. J. Pharmacol.* **164**: 1780-92 [PMID:21449978]
4. Zhao D, Sonawane ND, Levin MH and Yang B. (2007) Comparative transport efficiencies of urea analogues through urea transporter UT-B. *Biochim. Biophys. Acta* **1768**: 1815-21 [PMID:17506977]