ISO 9001:2015

PREADYTAKE-OCT2 is a product manufactured in compliance with ISO 9001:2015

PreadyTake

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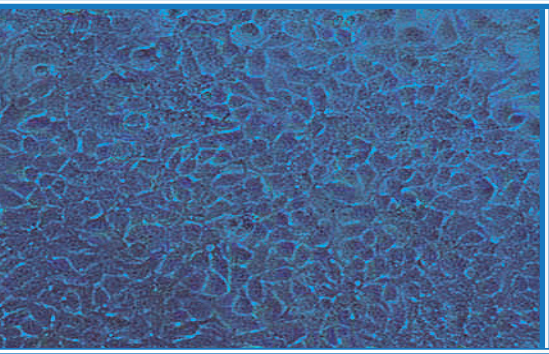
ReadyCell
EASING YOUR SCREENING

ReadyCell introduces **PreadyTake-OCT2**

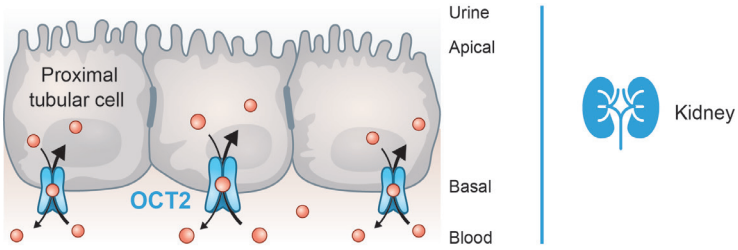


PreadyTake-OCT2 is a cell-based assay for drug transporter studies in preclinical testing. It is delivered at room temperature in a semi-solid shipping medium in a 96-well plate format with 60 full use wells. The plate contains embryonic kidney cells (*HEK293*) overexpressing the Organic Cation Transporter 2 and/or the empty vector, according to the assay requirements.

PreadyTake-OCT2 Applications

The OCT2-expressing HEK 293 cells model the net drug uptake in those barriers where it is expressed and allows identifying:

- OCT2 substrates, inhibitors and inducers
- Compound interactions (concomitantly administered drugs)
- Competitive inhibition (unexpected drug elimination)



The membrane-associated OCT2 transporter is mainly expressed in the renal tubular epithelial cells where it mediates cell internalization of positively charged drugs for their ulterior excretion through urine. Though in a lower proportion, OCT2 is also expressed in the brain, lungs, small intestine, thymus, placenta and inner ear

Four simple steps to use PreadyTake-OCT2

1 Recieve	2 Liquefy	3 Apply	4 Assay
Ready-to-use Cell Barrier	Liquefying of Solid Shipping Medium	Incubation with Test Compound	Assessment of Permeability/ Transport End Point

- Available on demand, adaptive to project schedule
- Worldwide room temperature shipments thanks to proprietary technology
- Ready-to-use format, reducing costs and easing the assay procedure
- Highest quality for a perfect replicability
- Adaptable to automation
- Specialized support from an experienced team

Jéssica Veiga-Matos, et al. Pharmacokinetics and Toxicokinetics Roles of Membrane Transporters at Kidney Level, 2020. J Pharm Pharm Sci (www.cspsCanada.org) 23, 333 -356

Hermann Koepsell, et al. Polyspecific Organic Cation Transporters: Structure, Function, Physiological Roles, and Biopharmaceutical Implications, 2007. Pharm Research, 24:1227-1251

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Experimental Data

Uptake kinetics of 1-methyl-4-phenylpyridinium (MPP+), a reference compound of the OCT2 transporter. Assays were performed after **PreadyTake-OCT2** was exposed for 4 days to the shipping medium and a subsequent *72 h* culture in fresh medium.
These data are the result of three independent experiments.

● **HEK-MOCK** ● **HEK-OCT2** ● **NET UPTAKE**

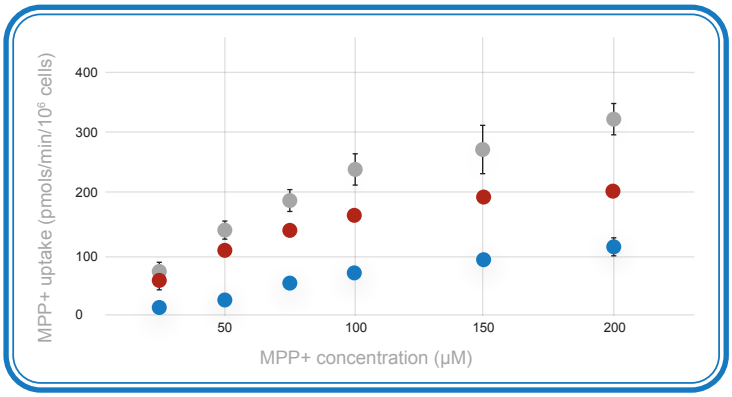

Figure 1 OCT2-mediated MPP+ internalization.

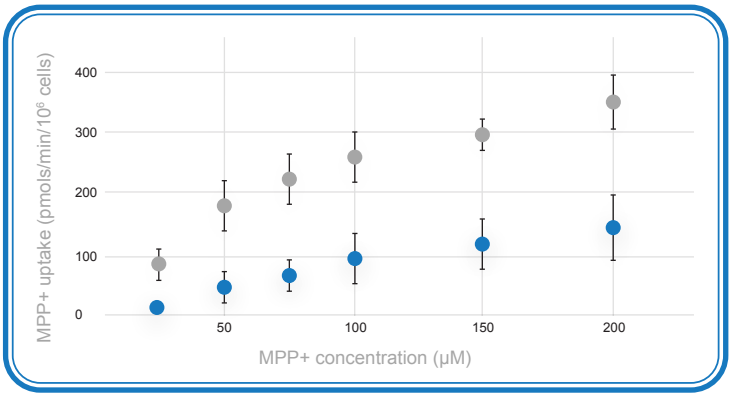

Figure 2 MPP+ uptake (batch-to-batch variation).

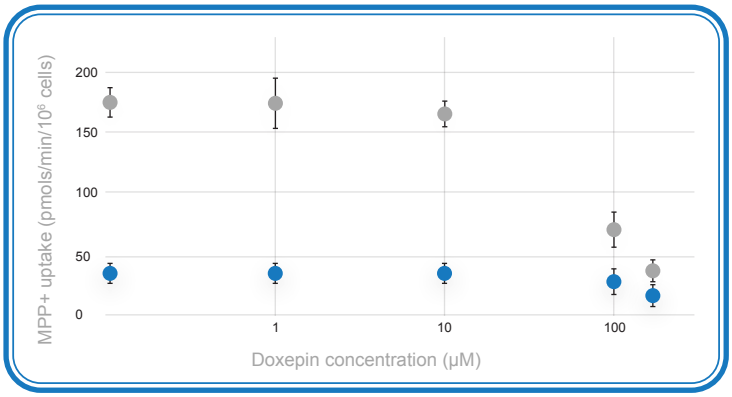

Figure 3 OCT2 inhibition by doxepin.
Measurement of MPP+ internalization after incubating HEK293 cells in the absence/presence of increasing concentrations of doxepin.

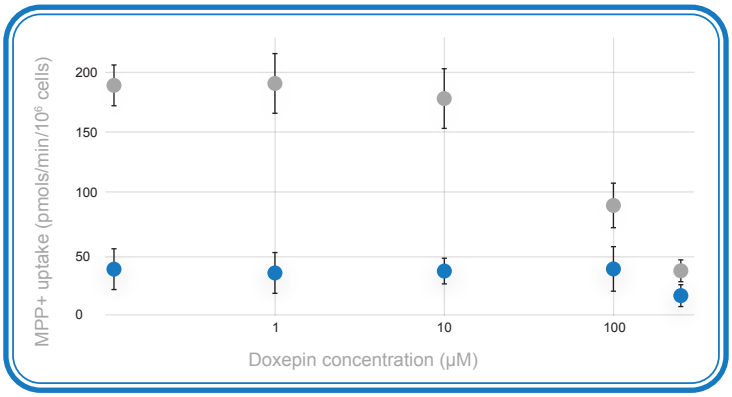

Figure 4 Doxepin inhibition (batch-to-batch variation).

Quality Controls

A fluorescence-based approach is used to rapidly evaluate **PreadyTake-OCT2** functionality. Assays were performed after **PreadyTake-OCT2** was exposed for 4 days to the shipping medium and a subsequent *72 h* culture in fresh medium.

● **HEK-MOCK** ● **HEK-OCT2** ● **NET UPTAKE**

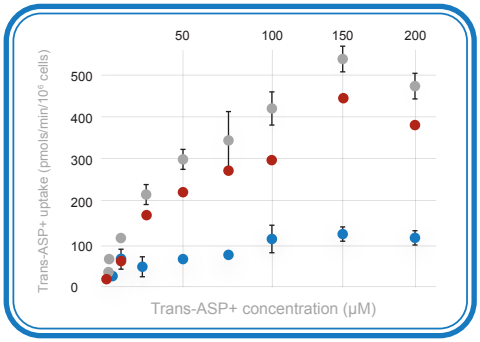

Figure 5 OCT2-mediated trans-ASP+ internalization. *These data are the result of 4 independent experiments.*

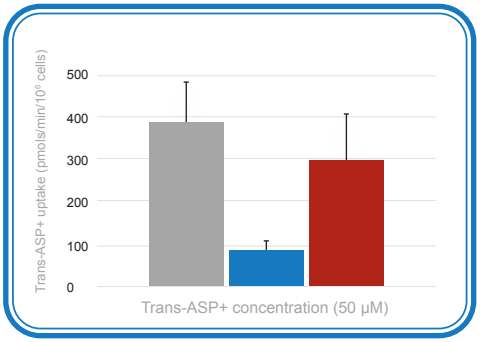

Figure 6 Trans-ASP+ uptake (batch-to-batch variation). *These data are the result of 4 independent experiments.*

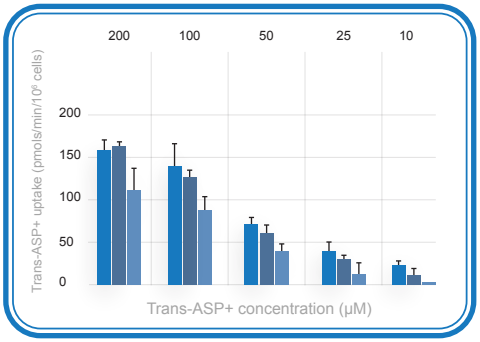

Figure 7 Effect of DMSO on OCT2 functionality
● 0,5% DMSO ● 1% DMSO ● 2% DMSO
These data refer to a single experiment in triplicates.

OCT2 – Regulatory Requirements
Recommendations for identifying OCT2 substrates and inhibitors are outlined by the 2020 FDA Guideline and recommended for consideration according to 2012 EMA Guideline