

DMPK Vesicle Assay

Hidden Pitfalls



Why standard vesicle kits fail — and what DMPK labs should demand instead

Sf9 baculovirus harvest variability

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Lot-to-Lot Variability Ruins Reproducibility

Sf9-based vesicle kits depend on precise baculovirus harvest timing. A window of just 12 hours determines transporter activity levels. Labs report IC50 values shifting 2-5x between lots -- forcing full assay re-optimisation with every new batch.

No EU cold-chain stock available

2

No EU Supplier — Transatlantic Delays Block Your Timeline

The dominant ABC transporter vesicle kit suppliers are US-based. Transatlantic cold-chain shipments take 5-10 business days, require import documentation, and are vulnerable to customs delays. Some suppliers ship only on fixed days -- a missed window means waiting another full week.

Missing renal transporters OAT1 / OAT3

3

Standard HK-2 Cells Miss 98% of Nephrotoxicity

HK-2 cells lack OAT1, OAT3, and OCT2 -- the transporters responsible for the majority of drug-induced kidney injury. 19% of Phase III failures are caused by nephrotoxicity. Only 2% are detected preclinically with standard HK-2 models.

What our customers say:

"Cell4Pharma's vesicles offer an unmatched dynamic range compared to other solutions on the market, ensuring higher sensitivity and reliability for drug transport studies."

-- Bio-Connect Life Sciences

"ciPTEC is a well-accepted in vitro model to screen compounds for their DIKI potential."

-- Dr. Oliver Wehmeier, Managing Director -- acCELLerate

"The ciPTEC mimics primary renal cells, but you can culture them for a long time without losing their properties. The expression of transporters gives a more accurate response to drugs and toxins. The cells grow fast and are easy to handle."

-- Renata Skovronova, Early Stage Researcher -- University of Turin

Your Complete Solution

From reproducible vesicle assays to validated nephrotoxicity prediction -- end to end.

SOLUTION FOR DMPK VESICLE ASSAY PITFALLS

Reproducibility

HEK293-Derived Vesicle Kits

HUMAN BIOLOGY. EVERY LOT.

ELIMINATES LOT VARIABILITY AT THE SOURCE

- Human membrane lipid composition
- Complex N-glycosylation (not Sf9)
- ATP/AMP ratio per lot on CoA
- BSEP >10 | Pgp >5 guaranteed
- No baculovirus harvest variability
- Non-radioactive compatible

EU Supply

EU Cold-Chain Delivery

NO TRANSATLANTIC DELAYS

2-4 DAY DELIVERY DACH, AT, CH, EU

- EU warehouse stock -- always available
- Same-day dispatch for urgent orders
- Full CoA + lot documentation included
- No import paperwork for EU labs
- Flexible -- single kit to project volume
- Technical support DE & EN

HK 2 Gap

ciPTEC Renal Cell Lines

OAT1/OAT3 FUNCTIONAL. HK-2 IS NOT.

75% SENSITIVITY | 100% SPECIFICITY (AZ)

- OAT1, OAT3, OCT2, MATE1/2 stable
- Validated vs. 62 compounds
- (2A0s+trpaazsesnaegceas) -- stable expression
- 90+ peer-reviewed publications
- 3D kidney-on-chip compatible
- Requires Human AB Serum -- also at SeamlessBio

Product	Format / Notes	Availability
ABC Transporter Vesicle Kits	BSEP, MRP1-5, MRP8, Pgp, BCRP -- HEK293	EU stock -- on request
ciPTEC Parental	OCT2, Pgp, MRP2/4, BCRP, Megalin	EU stock -- on request
ciPTEC-OAT1 (Recommended)	+ OAT1 (SLC22A6), MATE1/2 -- 75% sensitivity	EU stock -- on request
ciPTEC-OAT3	+ OAT3 (SLC22A8) -- 88% sensitivity	EU stock -- on request
Human Serum AB (ciPTEC supplement)	GMP-documented, EU/US certified donors	SeamlessBio -- same invoice



Interested? Call or write to us — Demo available on request!

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