



SOLVO[®]
BIOTECHNOLOGY
A CHARLES RIVER COMPANY

**MEMBRANE
TRANSPORTER
PRODUCTS**

1.

CELLULAR PERMEABILITY AND CELLULAR EFFLUX TRANSPORTER PRODUCTS

CacoReady™ – a ready-to-use Caco-2 assay system

CacoReady™ kits are ready-to-use products with a freshly grown polarized monolayer of Caco-2 cells on a semi-permeable filter. The Caco-2 monolayer system is most commonly used for *in vitro* preclinical evaluation of oral dosage products. The cells in the CacoReady™ system form tight junctions, microvilli and express transmembrane efflux transporters such as BCRP, MDR1, and MRP2, so are suitable for evaluation of (drug)molecules' permeation through passive diffusion as well as active transport.

The CacoGoblet™ product is based on the same cellular monolayer principle, but consists of Caco-2 cells co-cultured with functional goblet cells for a closer resemblance to the physiological intestinal structure, including the production of a mucus layer. This allows for *in vitro* assessment of any potential modulations of permeability in an *in vivo*-like intestinal system.

CacoReady™ and CacoGoblet™ plates are made to order and use a specific transportation medium to make sure cells are delivered in a ready-to-use condition.

HUMAN MODEL

Product name	Cell type	Available formats
CacoReady™	Caco-2	24 or 96 well plates
CacoGoblet™	Caco-2 co-cultured with goblet cells	24 well plates

PreadyPort™ – Monolayer-based Efflux Assessment Assay Kits

PreadyPort™ kits are ready-to-use products with a freshly grown polarized monolayer of transfected cells overexpressing the transporter of interest (or control cells) on a semi-permeable filter. The system is suitable for both efflux inhibition assays or for investigation of time- and concentration-dependent permeability of small molecules (substrate assessment). Active transport is determined based on bidirectional transport and calculation of an efflux ratio (basolateral-to-apical/apical-to-basolateral).

PreadyPort™ plates are made to order and use a specific transport medium to make sure cells are delivered in a ready-to-use condition. Custom plating setups for transfected and control cells on a single plate are available on demand.

HUMAN TRANSPORTERS

Transporter	Cell line	Available formats
BCRP	MDCKII	24 or 96 wells plate
MDR1 (P-gp)		
Control cells		

MEMBRANE-BASED EFFLUX TRANSPORTER PRODUCTS

Membrane Preparations for Traditional Vesicular Transport Assays

The Traditional Vesicular Transport (VT) Assay is an effective tool for studying inhibition (IC_{50} or K_i value determination) as well as substrate identification for efflux transporters with low permeability test compounds. The assay utilizes inside-out membrane vesicles produced from cells overexpressing the efflux transporter of interest. The assay is used to study accumulation in vesicles in the presence (active transport) and absence (control conditions) of ATP, the driving force of transport. Transporter-free negative control membranes are also available.

PREDIVEZ™ Reagent Kits for inhibition assessment (IC_{50} determination)

PREDIVEZ™ Reagent Kits are suitable for vesicular transport inhibition assays. The reagent kits contain a fluorescent probe substrate for the given transporter and the additional reagents needed. Kits are to be used with Traditional VT Membranes (purchased separately) and are available for the below membrane products.

Membrane products are shipped and stored frozen at least at $-80^{\circ}C$, allowing for flexible use.

HUMAN TRANSPORTERS

Transporter	Originating host cell type*	Additional PREDIVEZ™ Reagent Kits
BCRP	HEK293	available
BSEP		-
MDR1 (P-gp)		available
MRP1		-
MRP2		available
MRP3		available
MRP4		-
MRP5		available

PRECLINICAL SPECIES TRANSPORTERS

Species	Transporter	Originating host cell type*
mouse	mouseBcrp	MDCKII
	mouseBsep	Sf9
	mouseMdr1a	HEK293
rat	ratBcrp	HEK293
	ratBsep	HEK293
	ratMdr1b	Sf9-HAM
	ratMrp2	HEK293
	ratMrp3	HEK293
dog	dogBsep	HEK293
NHP (cynomolgus monkey)	cynoBcrp	HEK293
	cynoBsep	HEK293
	cynoMdr1	HEK293

Dry-ice shipment is the default shipping method. Optionally Liquid Nitrogen shipment is possible, but usually not required. Upon receipt, vesicles are recommended to be stored at -80°C.

*Certain transporters are available in other cellular backgrounds as well, for further information, please contact us at solvobiotech@crl.com.

PREDEASY™ ATPase Assay Kits

SOLVO's PREDEASY™ ATPase Assay Kit is a unique product for measuring the ATPase-dependent drug-membrane ABC transporter interaction in a convenient, "ready-to-assay" package. The PREDEASY™ kit delivers major technical improvements over the conventional ATPase assay, including higher sensitivity and shorter incubation times, and is an excellent choice for HTS assays.

PREDEASY™ Kits contain membranes and all reagents (chemicals) and solutions necessary to conduct ATPase activation and inhibition assays, as well as all documentation needed for data evaluation and interpretation.

HUMAN TRANSPORTERS

Transporter	Originating host cell type	Available formats*
MDR1 (P-gp)	Sf9, Hi5	Kit for 3 or for 10 assay plates (96 wells)
MRP2	Sf9	

PRECLINICAL SPECIES TRANSPORTERS

Transporter	Originating host cell type	Available formats*
Mouse Bsep	Sf9-HAM	Kit for 3 or for 10 assay plates (96 wells)
Rat Mdr1b	Sf9	

*Custom size kits are available upon request.

CELLULAR UPTAKE TRANSPORTER SYSTEMS

TranSelect™

Packaged in a convenient thaw-and-use format, SOLVO's TranSelect™ enables you lab to study solute carrier (SLC) uptake transporters. TranSelect™ cells can be seeded into any preferred plate format and used for transport inhibition assessment or for measuring the intracellular accumulation of a compound (substrate assay). In addition to the transfected uptake transporter-overexpressing cells, control cells are also available, and each order includes the appropriate amount of TranSelect™ Supplement for your assays. Cells are shipped from SOLVO to your lab and are to be stored frozen at ultralow temperature (in liquid nitrogen), allowing for flexible experiment timing.

HUMAN TRANSPORTERS

Transporter	Cell Type
MATE1	HEK293
MATE2-K	
OAT1	
OAT3	
OATP1B1	
OATP1B3	
OCT1	
OCT2	
Control	
Supplement	-

PREDICELL™

PrediCell™ plates are ready-to-use systems with stably transfected transporter-overexpressing or control cells for uptake (SLC) transporter interaction assays. The plates are available in both 24- and 96-well formats and can be used for inhibition (IC_{50} or K_i value determination), as well as substrate studies (accumulation studies, K_M and V_{max} determination).

PrediCell™ plates are made-to-order and shipped at room temperature, so are to be used directly after reception. By default, plates contain a 1:1 ratio of transfected and control cells, however custom plating setups are possible upon request.

HUMAN TRANSPORTERS

Transporter	Cell type*	Available formats
ASBT	HEK293	24 or 96 wells plate
MATE1	MDCKII	
MATE2-K	MDCKII	
NTCP	HEK293	
OAT1	HEK293	
OAT3	HEK293	
OATP1B1	HEK293	
OATP1B3	HEK293	
OATP1A2	HEK293	
OATP2B1	HEK293	
OCT1	HEK293	
OCT2	HEK293	
OCTN2	CHO	
Control	CHO, HEK293, MDCKII	

*Certain transporters are available in other cellular backgrounds as well, for further information, please contact us at solvobiotech@crl.com.

PRICES ARE AVAILABLE UPON REQUEST AT SOLVOBIOTECH@CRL.COM

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