

BD Gentest ATPase Assay Kit

Colorimetric Reagent Kit for ABC Transporter Membrane ATPase Assays

Colorimetric Reagent Kit for ABC Transporter Membrane ATPase Assays. The BD Gentest™ ATPase assay kit is a flexible, complete reagent kit delivering consistency across lots for testing all BD human and animal ABC transporter membranes with one simple protocol. Use this assay kit with confidence as it is also aligned with industry guidance recommendations.

Features

- Supports FDA-recommended P-gp and BCRP, as well as MRP membrane panels.
- Provides a simple, single protocol that accommodates all human and animal ABC transporter membrane studies.
- Delivers maximum flexibility allowing researchers the ability to perform a single transporter study or a full complement of P-gp, MRP, and BCRP studies with one kit.
- Saves researchers time by eliminating reagent preparation steps; assays can be completed within one day.
- Provides flexibility with single aliquot color reagents and stability for up to eight freeze-thaw cycles.

Kit supports industry guidance recommendations for ABC transporters

The kit supports USFDA-recommended¹ P-gp and ITC recommended BCRP² in vitro studies. The kit includes verapamil and sulfasalazine to determine if a new chemical entity (NCE) is a substrate or inhibitor of P-gp or BCRP, respectively.

¹USFDA/CDER, Drug Interaction Studies - Study Design, Data Analysis, and Implications for Dosing and Labeling, DRAFT GUIDANCE, September 2006.

²International Transporter Consortium (ITC) Drug Transporter Guidance Paper, Nature Reviews/ Drug Discovery MARCH 2010 | VOLUME 9 (www.nature.com/reviews/drugdisc)

Provides a high degree of reagent lot-to-lot consistency

Three ATPase kit lots were evaluated for lot-to-lot consistency using the same hP-gp, hBCRP, and hMRP2 membrane lots and the results obtained demonstrated reproducibility within experimental uncertainty (see **Figure 1/ Table 1**).

Flexible format with one kit, one protocol for all human and animal transporter membranes

Designed for maximum flexibility and researcher convenience, one ATPase protocol accommodates human and animal P-gp, MRP, and BCRP studies. Multiple transporter-use format supports single transporter assays such as five P-gp assays, or any combination of P-gp, MRP, and BCRP assays.

Robust design supports multiple time usage

Single reagent aliquots allow researchers to use one plate at a time (supports five 96-well plate assays), while saving the remaining reagents for use at a later date. The robust kit design supports up to eight freeze-thaw cycles with no significant loss in activity (see **Figure 2**).

Visit bdbiosciences.com/admetox for more information.

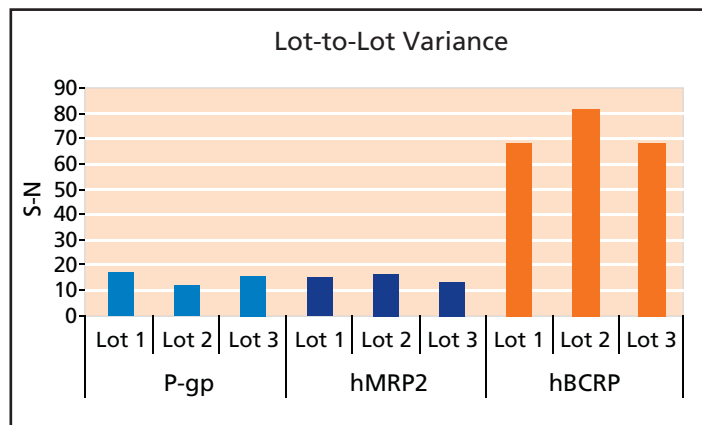


For Research Use Only. Not for use in diagnostic or therapeutic procedures.



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Transporter	Lot No.	Signal	Noise	S-N	S/N
hP-gp	1	20.9	3.2	17.7	6.5
	2	14.5	1.8	12.6	7.9
	3	18.2	2.1	16.1	8.7
CV (%)				16.6%	14.8%
hMRP2	1	16.2	0.8	15.4	19.3
	2	18.3	1.3	16.9	13.7
	3	15.1	1.2	13.9	12.2
CV (%)				9.9%	24.8%
hBCRP	1	84.2	15.1	69.1	5.6
	2	101.9	19.5	82.4	5.2
	3	80.2	11.4	68.8	7.1
CV (%)				10.6%	16.4%

Figure 1/Table 1

S-N: Signal minus noise (vanadate-sensitive substrate-stimulated ATPase activity)

S/N: Signal-to-noise ratio

CV measured as S-N and S/N ratios for three ATPase kit lots demonstrated excellent lot-to-lot consistency

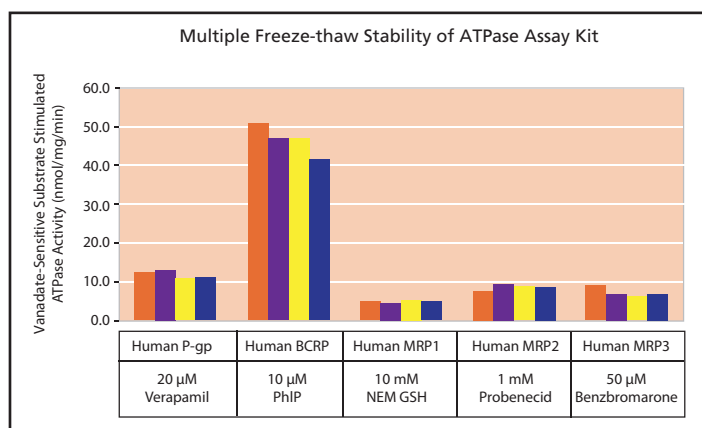


Figure 2. The BD Gentest ATPase assay kit was stable after eight freeze-thaw cycles. The loss of probe substrate-stimulated ATPase activity after eight freeze-thaw cycles was less than 20% across the panel of tested ABC transporter membranes. One batch of the corresponding ABC transporter membrane was used in this experiment.

Order Information

BD Gentest™ ATPase Assay Kit

Kit contains reagents for five 96-well plate assays

Description	Qty.	Cat.No.
<ul style="list-style-type: none"> Assay Buffer 10 mM Phosphate Standard 50 mM ATP 10 mM Sodium Orthovanadate Assay Stop Solution Reducing Agent Color Solution A Color Solution B 1 mM Verapamil 1 M N-Ethylmaleimide 1 M GSH 100 mM Probenecid 25 mM Benzbromarone 1 mM Sulfasalazine 	1 kit	459006

Related Products

BD Gentest ABC Transporter Membranes	Cat.No.
P-gp/MDR1/Mdr1 Human Cynomolgus Monkey Rhesus Monkey Beagle Dog Rat Mdr1a Rat Mdr1b Mouse Mdr1a Mouse Mdr1b	453228
	453230
	453231
	453229
	453440
	453434
	453232
	453250
MRP1/Mrp1 Human Rat	453456
	453340
MRP2/Mrp2 Human Rat	453332
	453334
MRP3 Human	453333
BCRP/Bcrp Human Mouse Rat	453270
	453251
	453457
Control	453200
BD GentestSM Contract Research Services	
ABC Transporter Studies	Contact your local rep to discuss.
<ul style="list-style-type: none"> ATPase assay in membranes Functional assays in vesicles 	

U.S. Orders

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Purchase Orders should be made out to:

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San Jose, CA 95131

Outside the U.S.

Contact your local distributor or visit bdbiosciences.com/offices to locate your nearest BD Biosciences office.



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