

BD Gentest™ Fresh Human Hepatocytes

Hepatocytes in plates, sandwich culture, and suspension



BD offers a full portfolio of fresh hepatocytes in plates, sandwich culture, and suspension to support drug metabolism and transport studies. High quality BD Gentest™ fresh hepatocytes maintain morphology and function for long term assays, such as enzyme induction, toxicity, metabolism of stable compounds, and drug transporter assays.

BD Gentest hepatocytes cultured on Collagen I with a BD Matrigel™ overlay in a sandwich culture form an in vivo-like hepatobiliary network that is critical for studying hepatic uptake and biliary efflux transporter activity. Compared to Collagen I surfaces alone, the BD Matrigel overlay creates a more physiological-like environment, maintains hepatocyte-specific morphology, and improves basal and induced CYP450 activities.

Features

- Supports ADME assays, such as metabolism, induction, transport, and toxicity requiring cultured human plateable hepatocytes
- Supports short-term ADME assays in suspension, such as metabolic stability and uptake transporter studies
- Saves researchers time with pre-made, ready-to-use hepatocyte cultures on Collagen I coated plates with, or without, BD Matrigel overlay
- Enables high throughput screening for discovery and development of drug candidates
- BD Collagen I substratum with BD Matrigel overlay
 - Improves cell health with increased basal and induced CYP450 activity
 - Supports bile canaliculi formation for efflux drug transport studies
 - Maintains typical hepatocyte morphology longer than a Collagen I surface

Fresh Hepatocytes Maintain Hepatic Morphology and Function

Fresh hepatocytes can be cultured for more than one week, which makes them ideal for studies requiring longer culture times, such as induction, efflux transport, and toxicity assays.

Multiple Formats Provide Researchers with Flexibility

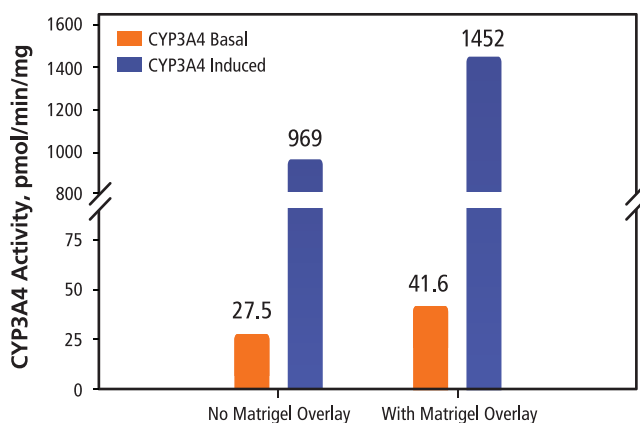
BD's portfolio of fresh hepatocytes includes flasks and 6, 12, 24, 48, and 96-well plates. These formats are available with BD BioCoat Collagen I as a substratum with, or without, BD Matrigel overlay.

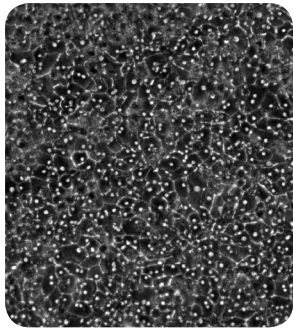
BD Matrigel Overlay Promotes a More In Vivo-like Environment

The BD Matrigel overlay improves basal activities for CYP450 activities compared to the conventional Collagen I coated surface.

BD Matrigel overlay improves both basal and induced CYP3A4 activity of human fresh hepatocytes (BD fresh hepatocyte lot 323 cultured on BD BioCoat™ Collagen I plates)

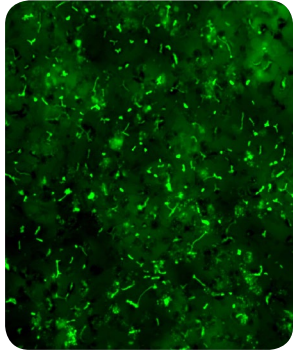
CYP3A4 Activity in BD Matrigel Overlaid Sandwich Culture





BD Matrigel Overlay Maintains Good Hepatocyte Morphology

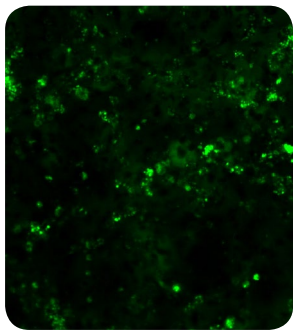
BD Matrigel™ overlay maintains good hepatocyte morphology with 100% monolayer confluence in culture on BD BioCoat™ Collagen I plates (BD fresh hepatocyte lot 323 on day 5 on BD BioCoat plates with BD Matrigel overlay; Bright field, 100x)



BD Fresh Hepatocytes in Sandwich Culture Enhance Extensive Bile Canaliculi Formation

BD fresh hepatocyte lot 323 forms bile canaliculi (Figure A) on day 5 culture in a BD BioCoat Collagen I plate with BD Matrigel overlay culture. Bile canaliculi formation is visualized by MRP2 fluorescent substrate: CDF (5-(and-6)-Carboxy-2,7-dichloro-fluorescein).

< **A. Day 5 CDFDA (5-(and-6)-Carboxy 2,7-dichloro-fluorescein diacetate) without MRP2 Inhibitor MK571 (100X)**

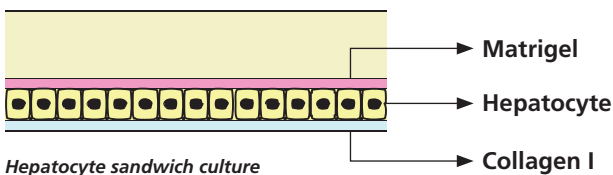


CDF bile accumulation is inhibited by MRP2 inhibitor MK571 (Figure B).

< **B. Day 5 CDFDA with MRP2 Inhibitor MK571 (100X)**

Ready to Use Sandwich Culture Plates Save Time and Resources

BD Matrigel overlay maintains good Hepatocytes are provided in a ready-to-use, pre-made sandwich (Collagen I substratum with BD Matrigel overlay) culture format. Upon receipt, the plates require minimal handling before beginning the assay.



Hepatocyte sandwich culture
on BD BioCoat Collagen I plates
with BD Matrigel overlay

ORDER INFORMATION

Description	Format	Quantity	Cat. No.
HUMAN FRESH PLATED HEPATOCYTES ON BD BIOCOAT COLLAGEN I PLATES	6-well	1 plate	454406
	12-well	1 plate	454412
	24-well	1 plate	454424
	48-well	1 plate	454425
	96-well	1 plate	454496
HUMAN FRESH HEPATOCYTES ON BD BIOCOAT COLLAGEN I PLATES WITH BD MATRIGEL OVERLAY	6-well	1 plate	454480
	12-well	1 plate	454481
	24-well	1 plate	454482
	48-well	1 plate	454483
	96-well	1 plate	454484
ONE MILLION HUMAN FRESH HEPATOCYTES IN SUSPENSION	10 million cells minimum order	1 million cells/vial	454401
HUMAN FRESH PLATED HEPATOCYTES ON BD BIOCOAT COLLAGEN I FLASKS	25 cm ²	1 flask	454415
	75 cm ²	1 flask	454475

RELATED PRODUCTS

Product Name	Format	Cat. No.
BD MATRIGEL BASEMENT MEMBRANE MATRIX PHENOL RED FREE	10 mL	35237
BD COLLAGEN I RAT TAIL	100 mg	356237
BD BIOCOAT COLLAGEN I PLATES, DISHES, AND FLASKS	6, 12, 24, 48, 96-well plates; 60 mm, 100 mm, 150 mm dishes 25 cm ² , 75 cm ² flasks	See BD Catalog
BD FALCON CELL CULTUREWARE	6, 12, 24, 48, and 96-well plates	See BD Catalog
BD FALCON PIPETS	1, 2, 5, 10, 25, 50, and 100 mL	See BD Catalog
BD GENTEST ADME/TOX CHEMICALS INCLUDING SUBSTRATES, INHIBITORS, AND METABOLITES		See BD Catalog
BD GENTEST CONTRACT RESEARCH SERVICES SM INCLUDING INDUCTION AND METABOLIC STABILITY ASSAYS USING HEPATOCYTES		See BD Catalog

IMPORTANT ORDERING INFORMATION



HepatoLink is the BD Biosciences immediate response system providing researchers with instant notification when BD Gentest hepatocyte products are available. For your convenience, select a preferred contact method—email, phone, and/or SMS text alerts. Upon registration, you will be sent donor characterization data when a new lot becomes available. Register online at www.bdbiosciences.com/admetox.

Place your order directly through BD's online system. If you have any questions regarding BD's program or your participation, please contact us at 978.901.7260 or email hepatocytes@bd.com.

For more information on BD Matrigel, which has been cited in more than 6,000 published papers, please visit bdbiosciences.com/cellculture/ecm.



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