

Human Hepatic Organoids

Adult stem-cell containing organoids with application in cell-based screening and life science research

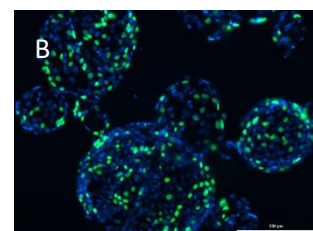
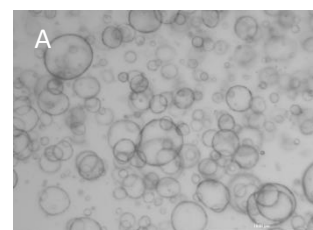
Human hepatic organoids were established from isolated adult stem cells of the human liver. They have been propagated in 3D culture conditions and are provided in a convenient, cryopreserved format. Supplied organoids are appropriate for *in vitro* expansion under suitable 3D culture conditions. Hepatic organoids have been tested for expression of stem cell marker LGR5, ductal marker SOX9 and hepatocyte marker HNF4 α . The potential to terminally-differentiate into functional hepatocytes has been ascertained by testing for albumin (ALB) and CYP3A4 expression.

DONOR TISSUE FEATURES

- Male donor, 84 years
- Additional donor history available on request

CELL CHARACTERISTICS

Batch number:	18-1205(8A)
Vial content:	1,000 organoid fragments
Appearance:	Disrupted organoid fragments
Seeding density:	300-500 organoid fragments per well
Culture medium:	AvantiCell medium (HE-HNM-COM) recommended
Recovery from frozen:	Re-embed using suitable 3D ECM conditions
Mycoplasma test:	Negative (by luminescence-based mycoplasma assay)
Virus tests:	Negative for HIV1, HIV2, HAV, HBV, HCV, HTLV1/2 (by real time PCR screen)



(A) Organoid morphology. Liver organoids were imaged by bright field microscope 4 days post-thaw. (magnification 2.5x)
(B) Organoid proliferation. Proliferative cells were visualized using EdU (5-ethynyl-2'-deoxyuridine) staining assay. (magnification 10x)

REAL TIME PCR ANALYSIS

Gene	Target Description	Fold change upon differentiation
SOX9	Ductal marker	0.27
HNF4 α	Hepatocyte marker	0.76
ALB	Mature/functional hepatocyte marker	173.60
CYP3A4	Mature/functional hepatocyte marker	5.15
LGR5	Stem cell marker	0.00050

USES AND RESTRICTIONS

- Store at -150°C. Once thawed do not re-freeze
- For research use ONLY — not suitable for *in vitro* diagnostic use or human or animal treatment
- Potential biohazard — handle with care

Leaders in Cell Culture