

HEP-G2 | 300198

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Description HEP-G2, a human liver carcinoma cell line, is derived from a 55-year-old male patient with hepatocellular carcinoma. The cells are maintained in DMEM/F12 medium supplemented with 5% fetal bovine serum (FBS) and 100 ng/ml dexamethasone. HEP-G2 cells are highly tumorigenic and can form xenografts in nude mice. The cells are characterized by their ability to produce and secrete various liver-specific proteins, including albumin, alpha-fetoprotein (AFP), and transferrin. HEP-G2 cells are widely used in research to study liver cancer biology, drug metabolism, and the effects of various treatments on liver cells.

Organism Human

Tissue Liver

Disease Hepatocellular carcinoma

Applications Cell culture, drug metabolism, liver cancer research, protein production, and xenograft formation.

Synonyms HEP-G2, Hep G2, HEP G2, Hep-G2, HEPG2

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Age 15 years

Gender Male

Ethnicity Caucasian

Morphology Epithelial cells

Growth properties Adherent

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Citation HEP-G2 (ATCC CCL-107) | Cytion 300198

Biosafety level 1

NCBI_TaxID 9606

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CellosaurusAccession CVCL_0027

Characteristics

Receptors expressed	IGF1R, IGF2R, IGF1R II (IGF II)
Protein expression	P53
Tumorigenic	Yes
Products	IGF1R, IGF2R (IGF1R, IGF2R), IGF1R-1 (IGF1R-1), IGF1R-1 (IGF1R-1)
Karyotype	46, XY, t(17;22)(p11;p11)

Culture

Culture Medium	Ham's F12, w: 1.0 mM β -mercaptoethanol, w: 1.0 mM β -mercaptoethanol, w: 1.1 g/L NaHCO ₃ (Cytion 820600a)
Supplements	10% FBS
Dissociation Reagent	Trypsin
Doubling time	48 hours
Subculturing	1:2 to 1:5 in F12 + 10% FBS, 1:2 to 1:5 in F12 + 10% FBS, 1:2 to 1:5 in F12 + 10% FBS
Seeding density	2 x 10 ⁴ to 3 x 10 ⁵ cells/cm ²
Fluid renewal	2 to 3 times per week
Post-Thaw Recovery	2 to 3 weeks in F12 + 10% FBS
Freeze medium	F12 + 10% FBS + 10% DMSO

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Thawing and Culturing Cells

1. Thaw the vial rapidly in a water bath at 37°C. Remove the vial and centrifuge at 300 x g for 3 minutes. Discard the supernatant and resuspend the pellet in 10 ml of DMEM supplemented with 10% FBS. Seed the cells into a T25 flask.
2. Incubate the cells in a humidified 5% CO₂ atmosphere at 37°C until they reach 70-80% confluency.
3. Harvest the cells by trypsinization and seed them into a new T25 flask with fresh medium.
4. Repeat the process until the cells are ready for use.
5. For long-term storage, harvest the cells and freeze them in a cryovial with 1 ml of freezing medium.
6. Store the cryovial in a liquid nitrogen vapor phase.
7. Thaw the cryovial rapidly in a water bath at 37°C and follow the thawing and culturing procedure.
8. The cells should be used within 12 months of freezing.

Incubation Atmosphere 37°C, 5% CO₂, humidified

Flask Coating None

Freezing Procedure Harvest cells and freeze in 1 ml of freezing medium in a cryovial. Store at -78°C.

Shipping Conditions Store at -78°C.

Storage Conditions Store at -150°C for up to 196 months.

Genotype / Phenotype / HLA

Sterility The cells are free of mycoplasmas and PCR detectable. The cells are free of endotoxins.

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██████ HLA

A*: '02:01:01, '24:02:01

B*: '35:14:01, '51:08:01

C*: 04:01:01, 16:02:01

DRB1*: 13:02:01, 16:02:01

DQA1*: '01:02:01, '05:05:01

DQB1*: 03:01, 06:04

DPB1*: '02:01:02, '04:02:01

E: 01:01:01