

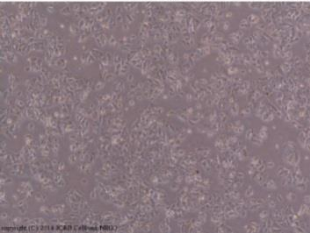
Human hepatoma cell line series

HuH-7 (JCRB0403)

Widely used in various research fields such as

- Cell culture-infection systems utilizing HuH-7 cells and JFH1 (HCV strain genotype 2a) is **a robust cellular system for HCV (hepatitis C virus) research**
- Used in **Xenograft models for cancer research**

JCRB0403-HuH-7(08192010)
start cell culture by Ozawa,M



General information

- Established in 1982 , Age 57, Male
- Well differentiated human hepato cellular carcinoma
- Produces albumin, alpha-fetoprotein, alpha-antitrypsin, ceruloplasmin, fibrinogen, fibronectin, haptoglobin, and transferrin etc.

Cell Name	Originator	Year	PubMed citation number
Hep G2	Aden	1979	23,400
HuH-7	Nakabayashi	1982	4,780
Hep3B	Aden	1979	2,578
HLE and HLF	Doi	1975	1,655
PLC/PRF/5	Alexander	1976	776

Reference

- Pubmed id: [29774518](#) HuH-7 reference genome profile: complex karyotype composed of massive loss of heterozygosity. Kasai F, Hirayama N, Ozawa M, Satoh M, Kohara A Hum Cell. 2018 Jul;31(3):261-267
- Pubmed id: [12518066](#) Clearance of replicating hepatitis C virus replicon RNAs in cell culture by small interfering RNAs. Randall G, Grakoui A, Rice CM Proc Natl Acad Sci U S A. 2003 Jan 7;100(1):235-40
- Pubmed id: [12438626](#) Highly permissive cell lines for subgenomic and genomic hepatitis C virus RNA replication. Blight KJ, McKeating JA, Rice CM J Virol. 2002 Dec;76(24):13001-14
- Pubmed id: [10390360](#) Replication of subgenomic hepatitis C virus RNAs in a hepatoma cell line. Lohmann V, Körner F, Koch J, Herian U, Theilmann L, Bartenschlager R Science. 1999 Jul 2;285(5424):110-3
- Pubmed id: [10576351](#) Establishment and characteristics of human hepatocellular carcinoma cells with metastasis to lymph nodes. Seki S, Kitada T, Kawada N, Sakaguchi H, Kadoya H, Nakatani K, Satake K, Kuroki T Hepatogastroenterology. 1999 Sep-Oct;46(29):2812-7
- Pubmed id: [2415243](#) Hormonal control of alpha-fetoprotein secretion in human hepatoma cell lines proliferating in chemically defined medium. Nakabayashi H, Taketa K, Yamane T, Oda M, Sato J Cancer Res. 1985 Dec;45(12 Pt 1):6379-83
- Pubmed id: [6203805](#) Phenotypical stability of a human hepatoma cell line, HuH-7, in long-term culture with chemically defined medium. Nakabayashi H, Taketa K, Yamane T, Miyazaki M, Miyano K, Sato J Gan. 1984 Feb;75(2):151-8
- Pubmed id: [6286115](#) Growth of human hepatoma cells lines with differentiated functions in chemically defined medium. Nakabayashi H, Taketa K, Miyano K, Yamane T, Sato J Cancer Res. 1982 Sep;42(9):3858-63

HuH Cell Lines (Other than HuH-7)

- **huH-1** (JCRB0199) Age 53, Male
Hepatoma, HBs-antigen carrier, Does not produce infective particles
- **HUH-6 Clone5** (JCRB0401) Infant, Male
Differentiated hepatoblastoma, Produces albumin, alpha-fetoprotein etc.
- **HuH28** (JCRB0426)
Bile duct carcinoma

HLE, HLF (Established from the same donor)

- **HLE** (JCRB0404) Age 68, Male
Hepatoma, non-differentiated, Cloned from epithelial-like cells
- **HLF** (JCRB0405) Age 68, Male
Hepatoma, non-differentiated, Cloned from fibroblast-like cells

JHH Cell Lines (Hepatocellular carcinoma)

- **JHH-2** (JCRB1028) Age 57, Male
Hepatocellular carcinoma (Ed-II)
- **JHH-4** (JCRB0435) Age 51, Male
Hepatocellular carcinoma (Ed-III), Produces high albumin and alpha-fetoprotein
- **JHH-5** (JCRB1029) Age 50, Male
Hepatocellular carcinoma, Produces albumin and alpha-fetoprotein
- **JHH-6** (JCRB1030) Age 57, Female
Hepatocellular carcinoma
- **JHH-7** (JCRB1031) Age 53, Male
Hepatocellular carcinoma (Ed-III), Produces albumin and alpha-fetoprotein

Cell Line	JCRB No.	Albumin (ng/mL/48hr)	AFP (ng/mL/48hr)	HBV-DNA Integration
JHH-2	JCRB1028	110	nd	–
JHH-4	JCRB0435	23,000	33	–
JHH-5	JCRB1029	600	110	–
JHH-6	JCRB1030	nd	nd	–
JHH-7	JCRB1031	560	360	+

NOZ/OZ (Gallbladder / Bile duct carcinoma)

- **NOZ** (JCRB1033) Age 48, Female
Gallbladder carcinoma of adenocarcinoma tubular (moderately differentiated),
Transplantable to mice
- **OZ**(JCRB1032) Age 71, Male
Bile duct carcinoma (poorly differentiated), Transplantable to mice

Human Ovarian cancer cell line series

- **OVICE** (JCRB1043) Age 40, Female
Clear cell adenocarcinoma, Transplantable to mice
- **OVKATE** (JCRB1044) Age 40, Female
Serous papillary adenocarcinoma , Transplantable to mice
- **OVMANA** (JCRB1045) Age 51 , Female
Clear cell adenocarcinoma, Transplantable to mice
- **OVSAHO** (JCRB1046) Age 56, Female
Serous papillary adenocarcinoma , Transplantable to mice
- **OVTOKO** (JCRB1048) Age 78, Female
Clear cell adenocarcinoma, Transplantable to mice

Cell Line	JCRB No.	Histopathology	Tumorigenesis in nude mice	
			s.c.	i.p.
OVICE	JCRB1043	Clear cell adenocarcinoma	Yes	No
OVKATE	JCRB1044	Serous papillary adenocarcinoma	Yes	Yes
OVMANA	JCRB1045	Clear cell adenocarcinoma	Yes	No
OVSAHO	JCRB1046	Serous papillary adenocarcinoma	Yes	Yes
OVTOKO	JCRB1048	Clear cell adenocarcinoma	Yes	Yes