

Attributions in the last two columns indicate where these misidentifications were reported and in no way imply responsibility for the cause by the authors or institutions.

This table is meant as a preliminary guide to avoiding suspect cell lines, but all recently acquired cell lines should be tested (e.g. by STR profiling for human cell lines) and compared to reference stock before use.

The "Contaminating Cell Line", in most cases, will have overgrown the claimed original, or will have replaced it by a technical error, and the original cells will no longer exist. Genuine examples of some cell lines, such as RT-4 human bladder carcinoma, may still exist (see Table 2); their identity would be confirmed by profiling.

We would be grateful for evidence of other misidentified lines not listed here or any other relevant information.

We would also be grateful to anyone who can confirm the existence of authentic stocks of any of the lines listed; please contact Amanda Capes-Davis [acapdav@gmail.com] and copy to Ian Freshney [i.freshney@ntlworld.com].

Confusion may also arise from two different cell lines having the same name; information on these would also be welcome.

Observations made in these lists are based on published reports and details obtained from cell banks, their websites, and Wikipedia. "Reference PubMed ID" refers to the unique ID number assigned by the PubMed database (<http://www.ncbi.nlm.nih.gov/pubmed/>).

The authors take no credit nor responsibility for any of the primary observations and have merely attempted to collate data previously available on other sites.

**Table 1. Cross-contaminated or Misidentified Cell Lines**

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
2474/90	Human	Gastric carcinoma	HT-29	Human	Colon carcinoma	MacLeod et al, 1999	10508494
2563 (MAC-21)	Human	Lung carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
2957/90	Human	Gastric carcinoma	HT-29	Human	Colon carcinoma	MacLeod et al, 1999	10508494
3051/80	Human	Gastric carcinoma	HT-29	Human	Colon carcinoma	MacLeod et al, 1999	10508494
41M	Human	Ovarian carcinoma	OAW 28	Human	Ovarian carcinoma	Wilson et al, 1996	8795574
ACC2	Human	Salivary gland, adenoid cystic carcinoma	HeLa	Human	Cervical adenocarcinoma	Phuchareon et al, 2009; Zhao et al, 2011	19557180, 21868764
ACC3	Human	Salivary gland, adenoid cystic carcinoma	HeLa	Human	Cervical adenocarcinoma	Phuchareon et al, 2009; Zhao et al, 2011	19557180, 21868764
ACCM	Human	Salivary gland, adenoid cystic carcinoma	HeLa	Human	Cervical adenocarcinoma	Phuchareon et al, 2009; Zhao et al, 2011	19557180, 21868764
ACCNS	Human	Salivary gland, adenoid cystic carcinoma	Unknown	Mouse	Unknown	Phuchareon et al, 2009	19557180
ACCS	Human	Salivary gland, adenoid cystic carcinoma	T-24	Human	Bladder carcinoma	Phuchareon et al, 2009	19557180
ADLC-5M2	Human	Lung carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
<i>Aedes aegypti</i> , Suitor's clone	Mosquito	Not specified	Unknown	Moth, <i>Antheraea eucalypti</i>	Not specified	Greene et al, 1972; Nelson-Rees et al, 1981	4402510, 6451928
<i>Aedes vexans</i> culture	Mosquito	Not specified	Unknown	Moth, <i>Antheraea eucalypti</i>	Not specified	Greene et al, 1972; Nelson-Rees et al, 1981	4402510, 6451928
AG-F	Human	Lymphoma, Hodgkin	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
AKI	Human	Melanoma	HeLa	Human	Cervical adenocarcinoma	Yoshino et al, 2006	16643607
ALVA-31	Human	Prostate carcinoma	PC-3	Human	Prostate carcinoma	van Bokhoven et al, 2001; Varella-Garcia et al, 2001	11304728, 11433521
ALVA-41	Human	Prostate carcinoma	PC-3	Human	Prostate carcinoma	van Bokhoven et al, 2001; Pan et al, 2001; Varella-Garcia et al, 2001	11304728, 11135436, 11433521
ALVA-55	Human	Prostate carcinoma	PC-3	Human	Prostate carcinoma	van Bokhoven et al, 2003	14518029
ALVA-101	Human	Prostate carcinoma	PC-3	Human	Prostate carcinoma	van Bokhoven et al, 2003	14518029
AMDURII	Human	Skin	LLC-PK1	Pig, <i>Sus scrofa</i>	Kidney, normal renal cells	Milanesi et al, 2003	14505435
AO	Human	Amnion	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
ARO	Human	Thyroid, anaplastic carcinoma	HT-29	Human	Colon carcinoma	Zhao et al, 2011	21868764
ARO81-1	Human	Thyroid, anaplastic carcinoma	HT-29	Human	Colon carcinoma	Schweppe et al, 2008	18713817
AV3	Human	Amnion	HeLa	Human	Cervical adenocarcinoma	Lavappa et al, 1976; Nelson-Rees et al, 1981	1250349, 6451928
AZ521	Human	Gastric carcinoma	HuTu 80	Human	Duodenal carcinoma	JCRB website	No PMID
B2-17	Human	Astrocytoma	U-251 MG	Human	Glioblastoma	JCRB website	No PMID
BCC1/KMC	Human	Basal cell carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
BE-13	Human	Leukemia, acute lymphoblastic, T cell	PEER	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
BHP 10-3	Human	Thyroid, papillary carcinoma	TPC-1	Human	Thyroid, papillary carcinoma	Schweppe et al, 2008	18713817

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
BHP 14-9	Human	Thyroid, papillary carcinoma	M14	Human	Melanoma	Schweppe et al, 2008	18713817
BHP 17-10	Human	Thyroid, papillary carcinoma	M14	Human	Melanoma	Schweppe et al, 2008	18713817
BHP 2-7	Human	Thyroid, papillary carcinoma	TPC-1	Human	Thyroid, papillary carcinoma	Schweppe et al, 2008; Zhao et al, 2011	18713817, 21868764
BHP 5-16	Human	Thyroid, papillary carcinoma	M14	Human	Melanoma	Schweppe et al, 2008; Zhao et al, 2011	18713817, 21868764
BHP 7-13	Human	Thyroid, papillary carcinoma	TPC-1	Human	Thyroid, papillary carcinoma	Schweppe et al, 2008	18713817
BIC-1	Human	Esophageal adenocarcinoma	SW-480, SW-620	Human	Colon carcinoma	Boonstra et al, 2010	20075370
BLIN-1 (also subclone 1E8)	Human	Leukemia, acute lymphoblastic, B cell precursor	NALM-6	Human	Leukemia, acute lymphoblastic, B cell precursor	Drexler et al, 2003	12592342
BM-1604	Human	Prostate carcinoma	DU-145	Human	Prostate carcinoma	MacLeod et al, 1999	10508494
BrCA 5	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees and Flandermeyer, 1977; Nelson-Rees et al, 1981	557237, 6451928
BT-B	Human	Bladder carcinoma	HeLa	Human	Cervical adenocarcinoma	DSMZ website	No PMID
C16 (MRC-5 derivative)	Human	Lung cells, fetal	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
C-433	Human	Giant cell tumor, benign	RD-ES	Human	Sarcoma (Ewing's)	DSMZ website	No PMID
CAC2	Human	Salivary gland, adenoid cystic carcinoma	Unknown	Rat	Unknown	Phuchareon et al, 2009	19557180
CaMa (clone 15)	Human	Breast carcinoma	Unknown	Syrian hamster and mouse	Unknown	Nelson-Rees et al, 1981	6451928
CaOV	Human	Ovarian carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
CaVe	Human	Gastric carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
CCL3	Human	Chordoma	Unknown	Mouse	Unknown	Brüderlein et al, 2010	21253487
Chang liver	Human	Liver, normal hepatic cells	HeLa	Human	Cervical adenocarcinoma	Lavappa et al, 1976; Nelson-Rees et al, 1981	1250349, 6451928
CHB	Human	Astrocytoma	Unknown	Rat	Not specified	Nelson-Rees et al, 1981	6451928
CHP-100	Human	Neuroblastoma	IMR-32	Human	Neuroblastoma	ECACC website	No PMID
CHP-234	Human	Neuroblastoma	Unknown	Human	Unknown	ATCC website	No PMID
Clom 15	Human	Glioblastoma	Unknown	Rat	Unknown	Higgins et al, 2010	20951163
Clone 1-5c-4	Human	Conjunctiva	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
Clone-16	Human	Pancreas, fetal endocrine cells	Unknown	Syrian hamster	Unknown	Matsuba et al, 1988	2903855
Clone 1A	Rainbow trout, <i>Oncorhynchus mykiss</i>	Blood	CHSE-214	Chinook salmon, <i>Oncorhynchus tshawytscha</i>	Embryo	Perry et al, 2001	19002917
CMP	Human	Rectal adenocarcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
CMP11 C2	Human	Rectal adenocarcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
CNDT2	Human	Carcinoid tumour	Unknown	Human	Unknown	Ellis et al, 2010	20959409
CO (= COLE)	Human	Lymphoma, Hodgkin	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
COLO-587	Human	Pancreatic carcinoma	COLO-320DM	Human	Colon carcinoma	ATCC FAQ #11058	No PMID
COLO-677	Human	Lung carcinoma, small cell	RPMI-8226	Human	Myeloma	DSMZ website	No PMID
COLO-720E	Human	Ovarian carcinoma	COLO684, COLO685	Human	Uterine adenocarcinoma	Personal communication, A. Capes-Davis	No PMID
COLO-818	Human	Melanoma	COLO-800	Human	Melanoma	MacLeod et al, 1999	10508494
CoLo-TC	Human	Colon carcinoma	COLO-205	Human	Colon carcinoma	RIKEN website	No PMID

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
<i>Culisita inornata</i> culture	Mosquito	Not specified	Unknown	Moth, <i>Antheraea eucalypti</i>	Not specified	Greene et al, 1972; Nelson-Rees et al, 1981	4402510, 6451928
D18T	Human	Synovial cell	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
D98/AH	Human	Not specified	HeLa	Human	Cervical adenocarcinoma	Honma et al, 1992	1730567
D98/AH2 Clone B	Human	Not specified	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
DAMI	Human	Leukemia, acute myeloid, M7	HEL	Human	Leukemia, acute myeloid, M6	MacLeod et al, 1997; Drexler et al, 2003	9447816, 12592342
DAPT	Human	Astrocytoma, piloid	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
DD	Human	Malignant histiocytosis	K-562	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2003	12592342
Det30A	Human	Breast carcinoma, ascitic fluid	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
Detroit-6 (Det6)	Human	Sternal marrow cells	HeLa	Human	Cervical adenocarcinoma	Lavappa et al, 1976; Nelson-Rees et al, 1981	1250349, 6451928
Detroit-98	Human	Sternal marrow cells	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
Detroit 98/AG	Human	Sternal marrow cells	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
Detroit 98/AH-2	Human	Sternal marrow cells	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
Detroit 98/AH-R	Human	Sternal marrow cells	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
Detroit 98s	Human	Sternal marrow cells	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
DJM-1	Human	Squamous cell carcinoma	BSCC-93	Human	Skin, squamous cell carcinoma	Yoshino et al, 2006	16643607
DM12 (Tu-167 derivative)	Human	Oral squamous cell carcinoma	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
DM14 (Tu-167 derivative)	Human	Oral squamous cell carcinoma	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
DRO	Human	Thyroid, anaplastic carcinoma	A-375	Human	Melanoma	Zhao et al, 2011	21868764
DRO90-1	Human	Thyroid, anaplastic carcinoma	A-375	Human	Melanoma	Schweppe et al, 2008	18713817
DuPro-1	Human	Prostate carcinoma	PC-3	Human	Prostate carcinoma	van Bokhoven et al, 2003	14518029
EB33	Human	Prostate carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees, 1979; Nelson-Rees et al, 1981	535908, 6451928
ECTC	Cow	Thyroid, embryonic	Vero	Monkey, African green ( <i>Cercopithecus aethiops</i> )	Kidney, normal renal cells	Milanesi et al, 2003	14505435
ECV-304	Human	Endothelium, normal cells	T-24	Human	Bladder carcinoma	Dirks et al, 1999; MacLeod et al, 1999	10614862, 10508494
ED27	Human	Chorionic villus	HeLa	Human	Cervical adenocarcinoma	Kniss et al, 2002	11869090
EEK	Horse	Kidney, embryonic renal cells	NSK	Pig, <i>Sus scrofa</i>	Kidney, normal renal cells	Milanesi et al, 2003	14505435
EH	Human	Leukemia, hairy cell	HK	Human	Leukemia, hairy cell	Drexler et al, 2003	12592342
EJ-1	Human	Bladder carcinoma	T-24	Human	Bladder carcinoma	Masters et al, 2001	11416159
Ej138	Human	Bladder carcinoma	T-24	Human	Bladder carcinoma	Azari et al, 2007	17254797
EiCo	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
EPC	Carp, <i>Cyprinus carpio</i>	Epithelial papilloma	Unknown	Fathead minnow, <i>Pimephales promelas</i>	Unknown	ATCC website	No PMID
EPLC3-2M1	Human	Lung carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
EPLC-65	Human	Lung carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
ESP1	Human	Lymphoma, Burkitt	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
ETK-1	Human	Cholangiocarcinoma	SSP-25	Human	Cholangiocarcinoma	Yoshino et al, 2006	16643607

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
EU-1	Human	Leukemia, acute lymphoblastic, B cell precursor	REH	Human	Leukemia, acute lymphoblastic, B cell precursor	Drexler et al, 2003	12592342
EU-7	Human	Leukemia, acute lymphoblastic, T cell	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
EUE	Human	Subcutis, fetal	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
EVL2	Human	Umbilical vein endothelium, transfected	Unknown	Human	Non-endothelial?	Unger et al, 2002	12453433
F2-4E5	Human	Thymic epithelium	SK-HEP-1	Human	Liver carcinoma	MacLeod et al, 1999	10508494
F2-5B6	Human	Thymic epithelium	SK-HEP-1	Human	Liver carcinoma	MacLeod et al, 1999	10508494
F255A4	Human	Not specified	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
FB2	Human	Thyroid, papillary carcinoma	TPC-1	Human	Thyroid, papillary carcinoma	Ribeiro et al, 2008	19087340
Fitz-HSA	Dog, <i>Canis familiaris</i>	Sarcoma (hemangiosarcoma)	DEN-HSA	Dog	Sarcoma (hemangiosarcoma)	O'Donoghue et al, 2011	21908323
FL	Human	Amnion	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981; Ogura et al, 1993	6451928, 8397027
Flow 13000	Human	Lung cells, embryonic fibroblast	MRC-5	Human	Lung cells, embryonic fibroblast	JCRB website	No PMID
Flow 5000	Human	Lung cells, embryonic fibroblast	Flow 1000	Human	Lung cells, embryonic fibroblast	JCRB website	No PMID
Flow 6000	Human	Lung cells, embryonic fibroblast	Flow 1000	Human	Lung cells, embryonic fibroblast	JCRB website	No PMID
Flow 7000	Human	Lung cells, embryonic fibroblast	Flow 3000	Human	Lung cells, embryonic fibroblast	JCRB website	No PMID
FQ	Human	Lymphoma, Hodgkin	OMK-210	Monkey, Owl ( <i>Aotus trivirgatus</i> )	Kidney, normal renal cells	Nelson-Rees et al, 1981; Drexler et al, 2003	6451928, 12592342
G-11 (HBT-3 derivative)	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
GHE	Human	Astrocytoma	T-24	Human	Bladder carcinoma	MacLeod et al, 1999	10508494
Girardi heart	Human	Heart, normal cells	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
GM1312	Human	Myeloma	Correct name, incorrect cell type	Human	EBV+ B-lymphoblastoid cell line	Drexler et al, 2003	12592342
GPS-M	Guinea pig	Spleen, adult cells	Strain L-M	Mouse	Connective tissue	Nelson-Rees et al, 1981	6451928
GPS-PD	Guinea pig	Spleen, adult cells	Strain L-M	Mouse	Connective tissue	Nelson-Rees et al, 1981	6451928
GRAF-X	Human	Liver, hepatic myofibroblast	Unknown	Rat	Unknown	MacLeod et al, 1999	10508494
GT3TKB	Human	Gastric carcinoma	RERF-LC-A1	Human	Lung carcinoma	Yoshino et al, 2006	16643607
H249	Human	Lung carcinoma, small cell	H69	Human	Lung carcinoma, small cell	Personal communication, M. Lisovitch to R. Nardone	No PMID
H-494	Human	Prostate carcinoma	HeLa	Human	Cervical adenocarcinoma	Williams, 1980	6244232
H7D7A and derivatives	Human	Liver, normal cells (SV40-transformed)	HepG2	Human	Liver, hepatocellular carcinoma	van Pelt et al, 2003	12619888
H7D7B and derivatives	Human	Liver, normal cells (SV40-transformed)	HepG2	Human	Liver, hepatocellular carcinoma	van Pelt et al, 2003	12619888
H7D7C and derivatives	Human	Liver, normal cells (SV40-transformed)	HepG2	Human	Liver, hepatocellular carcinoma	van Pelt et al, 2003	12619888
H7D7D and derivatives	Human	Liver, normal cells (SV40-transformed)	HepG2	Human	Liver, hepatocellular carcinoma	van Pelt et al, 2003	12619888
HAG	Human	Thyroid adenoma (goitre)	T-24	Human	Bladder carcinoma	MacLeod et al, 1999	10508494
HBC	Human	Breast carcinoma, invasive ductal tumor	Unknown	Rat	Unknown	Nelson-Rees and Flandermeyer, 1977; Nelson-Rees et al, 1981	557237, 6451928
HBL-100	Human	Breast carcinoma	Unknown	Human	Unknown	Yoshino et al, 2006; ATCC website	16643607
HBT-3	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
HBT-39b	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
HBT-E (HBT-3 clone)	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
HCE	Human	Cervical carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
HCU-10	Human	Esophageal squamous cell carcinoma	Hcu-10, Hcu-18, Hcu-22, Hcu-27, Hcu-33, Hcu-37 or Hcu-39 (genetically identical)	Human	Esophageal squamous cell carcinoma	van Helden et al, 1988	3167823

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
HCU-18	Human	Esophageal squamous cell carcinoma	Hcu-10, Hcu-18, Hcu-22, Hcu-27, Hcu-33, Hcu-37 or Hcu-39 (genetically identical)	Human	Esophageal squamous cell carcinoma	van Helden et al, 1988	3167823
HCU-22	Human	Esophageal squamous cell carcinoma	Hcu-10, Hcu-18, Hcu-22, Hcu-27, Hcu-33, Hcu-37 or Hcu-39 (genetically identical)	Human	Esophageal squamous cell carcinoma	van Helden et al, 1988	3167823
HCU-27	Human	Esophageal squamous cell carcinoma	Hcu-10, Hcu-18, Hcu-22, Hcu-27, Hcu-33, Hcu-37 or Hcu-39 (genetically identical)	Human	Esophageal squamous cell carcinoma	van Helden et al, 1988	3167823
HCU-33	Human	Esophageal squamous cell carcinoma	Hcu-10, Hcu-18, Hcu-22, Hcu-27, Hcu-33, Hcu-37 or Hcu-39 (genetically identical)	Human	Esophageal squamous cell carcinoma	van Helden et al, 1988	3167823
HCU-37	Human	Esophageal squamous cell carcinoma	Hcu-10, Hcu-18, Hcu-22, Hcu-27, Hcu-33, Hcu-37 or Hcu-39 (genetically identical)	Human	Esophageal squamous cell carcinoma	van Helden et al, 1988	3167823
HCU-39	Human	Esophageal squamous cell carcinoma	Hcu-10, Hcu-18, Hcu-22, Hcu-27, Hcu-33, Hcu-37 or Hcu-39 (genetically identical)	Human	Esophageal squamous cell carcinoma	van Helden et al, 1988	3167823
HCV-29Tmv (HCV-29 derivative)	Human	Bladder, tumorigenic urothelial cells	T-24	Human	Bladder carcinoma	Christensen et al, 1993	8105864
HEC-155	Human	Uterine adenocarcinoma	HEC-180	Human	Uterine carcinoma	JCRB website	No PMID
HEC-180	Human	Uterine adenocarcinoma	HEC-155	Human	Uterine adenocarcinoma	JCRB website	No PMID
HEK	Human	Kidney, embryonic renal cells	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
HEK/HRV (HEK derivative)	Human	Kidney, transformed embryonic renal cells	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
HEL-R66	Human	Not specified	Unknown	Monkey, African green ( <i>Cercopithecus aethiops</i> )	Unknown	Nelson-Rees et al, 1981	6451928, 7236009
HEp-2 (H.Ep.-2)	Human	Laryngeal carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981; Chen, 1988	6451928, 3180844
Hep-2C	Human	Laryngeal carcinoma	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
Hep2 (Clone 2B)	Human	Laryngeal carcinoma	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
HIMEG-1	Human	Leukemia, chronic myeloid	HL-60	Human	Leukemia, acute myeloid, M2	Drexler et al, 2003	12592342
HKB-1	Human	Lymphoma, Hodgkin	Unknown	Human	Unknown	Drexler et al, 2003	12592342
HKMUS	Human	Cervical carcinoma	SKG-II-SF	Human	Cervical carcinoma	RIKEN website	No PMID
HKMUS-SF	Human	Cervical carcinoma	SKG-II-SF	Human	Cervical carcinoma	Yoshino et al, 2006	16643607
HL111783	Human	Lung carcinoma	HeLa	Human	Cervical adenocarcinoma	Yoshino et al, 2006	16643607
HMV-1	Human	Melanoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
HPB-MLT	Human	Leukemia, acute lymphoblastic, T cell	HPB-ALL	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
HPC-36M (HPC-36 derivative)	Human	Prostate carcinoma	HeLa	Human	Cervical adenocarcinoma	Masters et al, 2001	11416159
hPTC	Human	Thyroid, papillary cell	Unknown	Pig, <i>Sus scrofa</i>	Unknown	MacLeod et al, 1999	10508494
Hs 677.St	Human	Gastric tissue, normal	Unknown	Mouse	Unknown	ATCC FAQ #1072	No PMID
HSC-41	Human	Gastric carcinoma	HSC-42	Human	Gastric carcinoma	JCRB website	No PMID
HSG	Human	Salivary gland, submandibular	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
HSG-AZA1	Human	Salivary gland, submandibular	HeLa	Human	Cervical adenocarcinoma	JCRB website	No PMID
HSG-AZA3	Human	Salivary gland, submandibular	HeLa	Human	Cervical adenocarcinoma	JCRB website	No PMID
HSGc-C5	Human	Oral carcinoma	HeLa	Human	Cervical adenocarcinoma	JCRB website	No PMID
HS-SULTAN	Human	Myeloma	JIOJOYE	Human	Lymphoma, Burkitt	Drexler et al, 2001; Drexler et al, 2003	11732505, 12592342
HSY	Human	Salivary gland, parotid	HeLa	Human	Cervical adenocarcinoma	JCRB website	No PMID

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
Hu1734	Human	Bladder, non-malignant urothelial cells	HCV-29	Human	Bladder, non-malignant urothelial cells	Christensen et al, 1993	7905254
Hu456	Human	Bladder, tumorigenic urothelial cells	T-24	Human	Bladder carcinoma	Christensen et al, 1993	8105864
Hu549	Human	Bladder, tumorigenic urothelial cells	T-24	Human	Bladder carcinoma	Christensen et al, 1993	8105864
Hu609	Human	Bladder, non-malignant urothelial cells	J82	Human	Bladder carcinoma	Christensen et al, 1993; Masters et al, 2001	7905254, 11416159
Hu609Tmv (Hu609 derivative)	Human	Bladder, tumorigenic urothelial cells	T-24	Human	Bladder carcinoma	Christensen et al, 1993	8105864
Hu961a, Hu961t (Hu961 derivatives)	Human	Bladder, tumorigenic urothelial cells	T-24	Human	Bladder carcinoma	Christensen et al, 1993; Masters et al, 2001	8105864, 11416159
HuK <sup>o</sup> 39	Human	Kidney, normal renal cells	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
HuL-1	Human	Liver, hepatocellular carcinoma	HeLa	Human	Cervical adenocarcinoma	JCRB website	No PMID
Hut	Human	Not specified	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
IMC-2	Human	Maxillary carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
IMC-3	Human	Maxillary carcinoma	HeLa	Human	Cervical adenocarcinoma	Masters et al, 2001	11416159
IMC-4	Human	Maxillary carcinoma	HeLa	Human	Cervical adenocarcinoma	RIKEN website	No PMID
Intestine 407 (Int-407, HEI)	Human	Intestinal cells (jejunum/ileum), embryonic	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
IPDDC-A2	Human	Astrocytoma	Unknown	Rat	Unknown	ECACC website	No PMID
IPRB	Human	Glioblastoma	Unknown	Rat	Unknown	Higgins et al, 2010	20951163
IPTP/98	Human	Glioblastoma	Unknown	Rat	Unknown	ECACC website	No PMID
IST-1	Human	Placenta	SK-OV-3	Human	Ovarian carcinoma	ATCC FAQ #1068	No PMID
J-111	Human	Leukemia, acute myeloid, M5	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981; Drexler et al, 2003	6451928, 12592342
J96	Human	Leukemia	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
JCA-1	Human	Prostate carcinoma	T-24	Human	Bladder carcinoma	van Bokhoven et al, 2001	11522622
JHC	Human	Placenta	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
JHU012	Human	Oral squamous cell carcinoma (lymph node)	JHU022	Human	Laryngeal squamous cell carcinoma (lymph node)	Zhao et al, 2011	21868764
JHU013 (JHU012 derivative)	Human	Oral squamous cell carcinoma (lymph node)	FaDu	Human	Hypopharyngeal squamous cell carcinoma	Zhao et al, 2011	21868764
JHU019	Human	Oropharyngeal squamous cell carcinoma	PC-3	Human	Prostate carcinoma	Zhao et al, 2011	21868764
JHU028	Human	Oral squamous cell carcinoma	A549	Human	Lung carcinoma	Zhao et al, 2011	21868764
JHT (JHC derivative)	Human	Placenta	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
JMAR (Tu-167 derivative)	Human	Oral squamous cell carcinoma	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
JOSK-I	Human	Leukemia, acute myeloid, M4	U-937	Human	Lymphoma, histiocytic	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
JOSK-K	Human	Leukemia, acute myeloid, M5	U-937	Human	Lymphoma, histiocytic	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
JOSK-M	Human	Leukemia, chronic myeloid, blast crisis	U-937	Human	Lymphoma, histiocytic	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
JOSK-S	Human	Leukemia, acute myeloid, M5	U-937	Human	Lymphoma, histiocytic	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
JTC-17	Human	Skin	HeLa	Human	Cervical adenocarcinoma	Honma et al, 1992; JCRB website	1730567
JTC-3	Human	Not specified	HeLa	Human	Cervical adenocarcinoma	Ogura et al, 1997	9556756
K051	Human	Leukemia, acute myeloid, M2	K-562	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2003	12592342

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
K1	Human	Thyroid, papillary carcinoma	GLAG-66	Human	Thyroid, papillary carcinoma	Ribeiro et al, 2008; Schweppe et al, 2008	19087340, 18713817
K2	Human	Thyroid, papillary carcinoma	GLAG-66	Human	Thyroid, papillary carcinoma	Ribeiro et al, 2008; Schweppe et al, 2008	19087340, 18713817
KAK1	Human	Thyroid, follicular adenoma	HT-29	Human	Colon carcinoma	van Staveren et al, 2007; Schweppe et al, 2008	17804723, 18713817
KAT10	Human	Thyroid, papillary carcinoma	HT-29	Human	Colon carcinoma	van Staveren et al, 2007; Schweppe et al, 2008	17804723, 18713817
KAT4	Human	Thyroid, anaplastic carcinoma	HT-29	Human	Colon carcinoma	van Staveren et al, 2007; Schweppe et al, 2008	17804723, 18713817
KAT5	Human	Thyroid, papillary carcinoma	HT-29	Human	Colon carcinoma	Schweppe et al, 2008	18713817
KAT50	Human	Thyroid, differentiated cells	HT-29	Human	Colon carcinoma	Schweppe et al, 2008	18713817
KAT7	Human	Thyroid, benign follicular hyperplasia	HT-29	Human	Colon carcinoma	Schweppe et al, 2008	18713817
KB	Human	Oral carcinoma	HeLa	Human	Cervical adenocarcinoma	Gartler, 1967; Lavappa et al, 1976; Nelson-Rees et al, 1981	4864103, 1250349, 6451928
KB-3-1	Human	Oral carcinoma	HeLa	Human	Cervical adenocarcinoma	DSMZ website	No PMID
KB-V1	Human	Oral carcinoma	HeLa	Human	Cervical adenocarcinoma	DSMZ website	No PMID
KCI-MOH1	Human	Pancreatic carcinoma	HPAC	Human	Pancreatic carcinoma	DSMZ website	No PMID
KM-3	Human	Leukemia, acute lymphoblastic, B cell precursor	REH	Human	Leukemia, acute lymphoblastic, B cell precursor	Drexler et al, 2003	12592342
KM3	Human	Melanoma	Unknown	Rat	Not specified	Moseley et al, 2003	12740908
KMS-21-BM	Human	Myeloma	Unknown	Human	Unknown	Drexler et al, 2003	12592342
KMT-2	Human	Umbilical cord blood	KG-1	Human	Leukemia	Yoshino et al, 2006	16643607
KNS-89	Human	Gliosarcoma	U-251 MG	Human	Glioblastoma	JCRB website	No PMID
KOSC-3	Human	Oral carcinoma	Ca9-22	Human	Oral carcinoma	JCRB website	No PMID
KP-1N	Human	Pancreatic carcinoma	PANC-1	Human	Pancreatic carcinoma	JCRB website	No PMID
KPB-M15	Human	Leukemia, chronic myeloid, blast crisis	KYO-1	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2003	12592342
KPL-1	Human	Breast carcinoma	MCF-7	Human	Breast carcinoma	DSMZ website	No PMID
KP-P1	Human	Prostate carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
KSY-1	Human	Sarcoma (Kaposi)	T-24	Human	Bladder carcinoma	ATCC FAQ #1061	No PMID
KU-YS	Human	Neuroblastoma	KU-SN	Human	Neuroectodermal tumor	RIKEN website	No PMID
L-132	Human	Lung cells, embryonic	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
L-41 (J96 derivative)	Human	Leukemia, bone marrow	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
LED-Ti	Human	Cervical carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
LLC-15MB	Human	Breast carcinoma	M14	Human	Melanoma	Thompson et al, 2004	15679051
LR10.6	Human	Leukemia, acute lymphoblastic, B cell precursor	NALM-6	Human	Leukemia, acute lymphoblastic, B cell precursor	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
LT-1	Frog, grass	Kidney, renal adenocarcinoma	TH and FHM	TH = box turtle; FHM = fathead minnow	TH = heart; FHM = unspecified	Nelson-Rees et al, 1981	6451928
LU	Human	Lung cells, fetal	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
LU 106	Human	Lung cells, embryonic	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
Lu-130	Human	Lung carcinoma	Lu-134A, B	Human	Lung carcinoma	Yoshino et al, 2006	16643607
M10T	Human	Synovial cell	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
M4A4 and derivatives (MDA-MB-435 derivatives)	Human	Breast carcinoma	M14	Human	Melanoma	ATCC website	No PMID
MA-104	Monkey, Rhesus ( <i>Macaca mulatta</i> )	Kidney, embryonic renal cells	Vero?	Monkey, African green ( <i>Cercopithecus aethiops</i> )	Kidney, normal renal cells	Milanesi et al, 2003; ATCC FAQ #1067	14505435



Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
MA-111	Rabbit	Kidney, newborn	Vero?	Monkey, African green ( <i>Cercopithecus aethiops</i> )	Kidney, normal renal cells	Nelson-Rees et al, 1981	6451928
MA-160	Human	Prostate adenoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees, 1977; Nelson-Rees et al, 1981	562836, 6451928
MaTu	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
MC-4000	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
McCoy	Human	Not specified	Strain L	Mouse	Connective tissue	Nelson-Rees et al, 1981	6451928
MCF-7/AdrR (NCI/ADR-RES)	Human	Breast carcinoma	OVCA8-8	Human	Ovarian carcinoma	Liscovitch and Ravid, 2007	16504380
MDA-MB-435	Human	Breast carcinoma	M14	Human	Melanoma	Ellison et al, 2002; Christgen et al, 2007; Rae et al, 2007	12354931, 17786032, 17004106
MDA-N (MDA-MB-435 derivative)	Human	Breast carcinoma, HER2/ERBB2-transfected	M14	Human	Melanoma	Lorenzi et al, 2009	19372543
MDS	Human	Leukemia, chronic myelomonocytic	JURKAT	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
MEL-HO	Human	Melanoma	Unknown, does not match other cell line from same donor	Human	Unknown	MacLeod et al, 1999	10508494
ME-WE1	Human	Melanoma	Unknown, does not match other cell line from same donor	Human	Unknown	MacLeod et al, 1999	10508494
MGH-U1 (EJ)	Human	Bladder carcinoma	T-24	Human	Bladder carcinoma	O'Toole et al, 1983; Lin et al, 1985	6823318, 4027986
MGH-U2 (HM)	Human	Bladder carcinoma	T-24	Human	Bladder carcinoma	O'Toole et al, 1983; Lin et al, 1985	6823318, 4027986
MHH-225	Human	Leukemia, acute myeloid, M7	JURKAT	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
Minnesota EE	Human	Esophageal epithelium	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
MKB-1	Human	Leukemia, acute myeloid	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
MKN28	Human	Gastric carcinoma	MKN74	Human	Gastric carcinoma	JCRB website	No PMID
MKN-7	Human	Gastric carcinoma	Unknown	Human	Lymphoblastoid cells	Suzuki and Sekiguchi, 1999	No PMID (book chapter)
MMAc	Human	Melanoma	Mash-1	Human	Schwannoma	Yoshino et al, 2006	16643607
MOBS-1	Human	Leukemia, acute myeloid, M5	U-937	Human	Lymphoma, histiocytic	Drexler et al, 2003	12592342
MOLT-15	Human	Leukemia, acute lymphoblastic, T cell	CTV-1	Human	Leukemia, acute myeloid, M5	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
MPanc-96	Human	Pancreatic carcinoma	AsPC-1	Human	Pancreatic carcinoma	ATCC website	No PMID
MRO87-1	Human	Thyroid, follicular carcinoma	HT-29	Human	Colon carcinoma	Schweppe et al, 2008	18713817
MS (Monkey Stable)	Monkey	Kidney, normal renal cells	HeLa	Human	Cervical adenocarcinoma	Milanesi et al, 2003	14505435
MT-1	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
MUTZ-1	Human	Leukemia, acute myeloid, M2	Namalwa	Human	Lymphoma, Burkitt	Drexler et al, 2009	19344951
MV522	Human	Lung carcinoma	HT-29	Human	Colon carcinoma	ATCC FAQ #1075	No PMID
NC-37	Human	Lymphoblastoid cell line, normal donor	Raji	Human	Lymphoma, Burkitt	JCRB website	No PMID
NCC16	Human	Cervical carcinoma	PHK16-0b	Human	Skin, immortalised keratinocytes	JCRB website	No PMID
NCI/ADR-RES (MCF-7/AdrR)	Human	Breast carcinoma	OVCA8-8	Human	Ovarian carcinoma	Liscovitch and Ravid, 2007	16504380
NCI-H1264	Human	Lung carcinoma	NCI-H157	Human	Lung carcinoma	ATCC FAQ #930, #931	No PMID
NCI-H1304	Human	Lung carcinoma, small cell	NCI-H1870	Human	Lung carcinoma, small cell	ATCC FAQ #1069	No PMID
NCI-H1514	Human	Lung carcinoma	Unknown	Human	Unknown	Durkin et al, 2000; ATCC website	10949990
NCI-H157	Human	Lung carcinoma	NCI-H1264	Human	Lung carcinoma	ATCC FAQ #930, #931	No PMID



Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
NCI-H1622	Human	Lung carcinoma	Unknown	Human	Unknown	ATCC website	No PMID
NCI-H1870	Human	Lung carcinoma, small cell	NCI-H1304	Human	Lung carcinoma, small cell	ATCC FAQ #1069	No PMID
NCI-H249	Human	Lung carcinoma, small cell	NCI-H69	Human	Lung carcinoma, small cell	ATCC FAQ #1073	No PMID
NCI-H513	Human	Mesothelioma	NCI-H125	Human	Lung carcinoma	ATCC FAQ #1060	No PMID
NCI-H592	Human	Lung carcinoma, small cell	NCI-H69	Human	Lung carcinoma, small cell	ATCC FAQ #1070, #1073	No PMID
NCI-H60	Human	Lung carcinoma, small cell	NCI-N417	Human	Lung carcinoma, small cell	ATCC FAQ #1064	No PMID
NCI-H630	Human	Metastatic sample	Mixture	Human	Unknown	ATCC FAQ #1065	No PMID
NCI-H738	Human	Lung carcinoma	Unknown	Human	Unknown	ATCC website	No PMID
NCOL-1	Human	Intestinal cells, normal colon	LoVo	Human	Colon carcinoma	Melcher et al, 2005	15771911
NCTC 2544	Human	Skin epithelium	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
NCTC 3075	Human	Not specified	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
ND-1	Human	Prostate carcinoma	DU-145	Human	Prostate carcinoma	van Bokhoven et al, 2001	11304728
NM2C5 and derivatives (MDA-MB-435 derivatives)	Human	Breast carcinoma	M14	Human	Melanoma	ATCC website	No PMID
NOI-90	Human	Lymphoma, non-Hodgkin, natural killer cell	REH	Human	Leukemia, acute lymphoblastic, B cell precursor	Drexler et al, 2003	12592342
NPA87	Human	Thyroid, papillary carcinoma	M14	Human	Melanoma	Schweppe et al, 2008; Zhao et al, 2011	18713817, 21868764
NS-3	Human	Gastric carcinoma	COLO 201	Human	Colon carcinoma	JCRB website	No PMID
OCUM-6	Human	Gastric carcinoma	OCUM-11	Human	Gastric carcinoma	JCRB website	No PMID
OE	Human	Endometrium	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981; Ogura et al, 1997	6451928, 9556756
OF	Human	Not specified	HeLa	Human	Cervical adenocarcinoma	Ogura et al, 1997	9556756
OLGA-PH-J/92 [OL-J/92]	Crayfish, <i>Orconectes limosus</i>	Brain, cerebral ganglion	Unknown	Unknown, similar to amoeba species	Unknown	Lee et al, 2011; ATCC website	21938590
ONCO-DG-1	Human	Thyroid, papillary carcinoma	OVCAR-3	Human	Ovarian carcinoma	DSMZ website	No PMID
OST	Human	Sarcoma (osteosarcoma)	HeLa	Human	Cervical adenocarcinoma	Personal communication, R. Nardone	No PMID
OU-AML-1	Human	Leukemia, acute myeloid, M4	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OU-AML-2	Human	Leukemia, acute myeloid, M2	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OU-AML-3	Human	Leukemia, acute myeloid, M4	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OU-AML-4	Human	Leukemia, acute myeloid, M2	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OU-AML-5	Human	Leukemia, acute myeloid, M5	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OU-AML-6	Human	Leukemia, acute myeloid, M1	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OU-AML-7	Human	Leukemia, acute myeloid, M4	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OU-AML-8	Human	Leukemia, acute myeloid, M4	OCI/AML2	Human	Leukemia, acute myeloid, M4	Drexler et al, 2003	12592342
OV-1063	Human	Ovarian carcinoma	Unknown	Human	Unknown	ATCC website	No PMID
OVMIU	Human	Ovarian carcinoma	OVSAYO	Human	Ovarian carcinoma	JCRB website	No PMID
P1-1A3	Human	Thymic epithelium	SK-HEP-1	Human	Liver carcinoma	MacLeod et al, 1999	10508494
P1-4D6	Human	Thymic epithelium	SK-HEP-1	Human	Liver carcinoma	MacLeod et al, 1999	10508494
P39/TSUGANE (P39/TSU)	Human	Leukemia, acute myeloid, M2	HL-60	Human	Leukemia, acute myeloid, M2	Drexler et al, 2003; JCRB website	12592342

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
PBEI	Human	Leukemia, acute lymphoblastic, B cell precursor	NALM-6	Human	Leukemia, acute lymphoblastic, B cell precursor	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
PC-93	Human	Prostate carcinoma	HeLa	Human	Cervical adenocarcinoma	van Bokhoven et al, 2003	14518029
PC-MDS	Human	Myelodysplastic syndrome, therapy-related	K-562	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2009	19344951
PCI-22A	Human	Oral squamous cell carcinoma	Unknown, does not match other cell line from same donor	Human	Unknown	Zhao et al, 2011	21868764
PCI-22B	Human	Oral squamous cell carcinoma (lymph node)	Unknown, does not match other cell line from same donor	Human	Unknown	Zhao et al, 2011	21868764
PCI-3	Human	Oropharyngeal squamous cell carcinoma	PC-3	Human	Prostate carcinoma	Zhao et al, 2011	21868764
PEAZ-1	Human	Prostate carcinoma	HT-1080	Human	Sarcoma (fibrosarcoma)	Schmelz et al, 2001 [erratum]	11433418 [erratum]
PH61-N	Human	Not specified	MIA PaCa-2	Human	Pancreatic carcinoma	JCRB website	No PMID
PLB-985	Human	Leukemia, acute myeloid, M4	HL-60	Human	Leukemia, acute myeloid, M2	Drexler et al, 2003	12592342
PPC-1	Human	Prostate carcinoma	PC-3	Human	Prostate carcinoma	Chen, 1993	8428522
PSV811	Human	Skin fibroblast, Werner's syndrome	WI-38	Human	Lung, normal diploid fibroblasts	JCRB website	No PMID
RAMAK-1	Human	Muscle synovium	T-24	Human	Bladder carcinoma	MacLeod et al, 1999	10508494
RB	Human	Lymphoma, Hodgkin	OMK-210	Monkey, Owl ( <i>Aotus trivirgatus</i> )	Kidney, normal renal cells	Nelson-Rees et al, 1981; Drexler et al, 2003	6451928, 12592342
RBHF-1	Human	Liver, hepatoma	Unknown	Non-human	Unknown	MacLeod et al, 1999	10508494
RC-2A	Human	Leukemia, acute myeloid, M4	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
RED-3	Human	Leukemia, acute myeloid	HL-60	Human	Leukemia, acute myeloid, M2	Drexler et al, 2003	12592342
REH-6	Human	Leukemia, acute lymphoblastic, B cell precursor	Unknown	Mouse	Unknown	Drexler et al, 2003	12592342
RERF-LC-MA	Human	Lung carcinoma, small cell	SK-MES-1	Human	Lung, squamous cell	Personal communication, A. Capes-Davis	No PMID
RERF-LC-OK	Human	Lung carcinoma	Marcus	Human	Astrocytoma	JCRB website	No PMID
RM-10	Human	Leukemia, chronic myeloid, blast crisis	K-562	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2003	12592342
RMG-I	Human	Ovarian carcinoma	RMG-II	Human	Ovarian carcinoma	JCRB website	No PMID
RMUG-L	Human	Ovarian carcinoma	SNG-II	Human	Endometrial carcinoma	JCRB website	No PMID
RPMI-4788	Human	Colon carcinoma	HeLa	Human	Cervical adenocarcinoma	Personal communication, A. Capes-Davis	No PMID
RPMI-6666	Human	Lymphoma, Hodgkin	Correct name, incorrect cell type	Human	EBV+ B-lymphoblastoid cell line	Drexler et al, 2003	12592342
RPTC-1	Human	Thyroid, papillary carcinoma	TPC-1	Human	Thyroid, papillary carcinoma	Zhao et al, 2011	21868764
RS-1	Human	Leukemia, acute myeloid, M7	K-562	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2003	12592342
RTSG	Human	Ovarian carcinoma	SNG-II	Human	Endometrial carcinoma	JCRB website	No PMID
RY	Human	Lymphoma, Hodgkin	Unknown	Monkey	Unknown	Harris et al, 1981; Drexler et al, 2003	7192801, 12592342
SA4	Human	Sarcoma (liposarcoma)	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
SAM-1	Human	Leukemia, chronic myeloid, blast crisis	K-562	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2003	12592342
SAML-1	Human	Lymphoma, Hodgkin	U-937	Human	Lymphoma, histiocytic	ATCC FAQ #1074	No PMID
SBC-2	Human	Bladder carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
SBC-7	Human	Bladder carcinoma	HeLa	Human	Cervical adenocarcinoma	MacLeod et al, 1999	10508494
SCCTF	Human	Oral squamous cell carcinoma	SCCKN	Human	Oral squamous cell carcinoma	Yoshino et al, 2006	16643607
SCLC-16H	Human	Lung carcinoma, small cell	SCLC-21/22H	Human	Lung carcinoma, small cell	MacLeod et al, 1999	10508494
SCLC-24H	Human	Lung carcinoma, small cell	SCLC-21/22H	Human	Lung carcinoma, small cell	MacLeod et al, 1999	10508494
SEG-1	Human	Esophageal adenocarcinoma	NCI-H460	Human	Lung carcinoma, large cell	Boonstra et al, 2010	20075370

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
SH-2	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
SH-3	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
SJPL	Pig, <i>Sus scrofa</i>	Lung cells, immortalized epithelial	Unknown	Monkey, African green ( <i>Cercopithecus aethiops</i> )	Unknown	Silversides et al, 2010	20200241
SK-GT-5	Human	Esophageal adenocarcinoma	SK-GT-2	Human	Gastric carcinoma (gastric fundus)	Boonstra et al, 2010	20075370
SK-MG-1	Human	Astrocytoma	Marcus	Human	Astrocytoma	JCRB website	No PMID
SK-N-MC	Human	Neuroblastoma	Unknown	Human	Sarcoma (Ewing's)	Staeger et al, 2004	15548687
SKW-3	Human	Leukemia, chronic lymphocytic, T cell	KE-37	Human	Leukemia, acute lymphoblastic	DSMZ website	No PMID
SNB-19	Human	Glioblastoma	U-251 MG	Human	Glioblastoma	Azari et al, 2007; ATCC website	17254797
SPI-801	Human	Leukemia, acute lymphoblastic, T cell	K-562	Human	Leukemia, chronic myeloid, blast crisis	Gignac et al, 1993; Drexler et al, 2003	8220135, 12592342
SPI-802	Human	Leukemia, acute lymphoblastic, T cell	K-562	Human	Leukemia, chronic myeloid, blast crisis	Gignac et al, 1993; Drexler et al, 2003	8220135, 12592342
SpR	Human	Lymphoma, Hodgkin	OMK-210	Monkey, Owl ( <i>Aotus trivirgatus</i> )	Kidney, normal renal cells	Nelson-Rees et al, 1981; Drexler et al, 2003	6451928, 12592342
SQ-5	Human	Lung carcinoma	HeLa	Human	Cervical adenocarcinoma	Yoshino et al, 2006	16643607
SR-91	Human	Leukemia, acute lymphoblastic, T cell	AML-193	Human	Leukemia, acute myeloid, M5	Drexler et al, 2003	12592342
SW-527	Human	Colon carcinoma	SW-480, SW-620	Human	Colon carcinoma	Nelson-Rees et al, 1981	6451928
SW-598	Human	Colon carcinoma	SW-480, SW-620	Human	Colon carcinoma	Nelson-Rees et al, 1981	6451928
SW-608	Human	Colon carcinoma	SW-480, SW-620	Human	Colon carcinoma	Nelson-Rees et al, 1981	6451928
SW-613	Human	Colon carcinoma	SW-480, SW-620	Human	Colon carcinoma	Nelson-Rees et al, 1981	6451928
SW-732	Human	Colon carcinoma	SW-480, SW-620	Human	Colon carcinoma	Nelson-Rees et al, 1981	6451928
SW-733	Human	Colon carcinoma	SW-480, SW-620	Human	Colon carcinoma	Nelson-Rees et al, 1981	6451928
T-1	Human	Kidney, normal renal cells	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1980; Nelson-Rees et al, 1981	7394535, 6451928
T-33	Human	Leukemia, chronic myeloid, blast crisis	K-562	Human	Leukemia, chronic myeloid, blast crisis	Drexler et al, 2003	12592342
T404	Human	Oral squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
T406	Human	Oral squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
T409	Human	Oral squamous cell carcinoma	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
T-9 (WI-38 derivative)	Human	Lung cells, transformed normal diploid fibroblasts	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
TCO-1	Human	Cervical carcinoma	TCO-2	Human	Cervical carcinoma	Yoshino et al, 2006	16643607
TDL-1	Human	Tonsillar lymphoid cells, non-neoplastic	P3JHR-1	Human	Lymphoma, Burkitt	Nelson-Rees et al, 1981	6451928
TDL-2	Human	Tonsillar lymphoid cells, non-neoplastic	P3JHR-1	Human	Lymphoma, Burkitt	Nelson-Rees et al, 1981	6451928
TDL-3	Human	Tonsillar lymphoid cells, non-neoplastic	RPMI 1788	Human	Lymphoblastoid cell line, normal donor	Nelson-Rees et al, 1981	6451928
TDL-4	Human	Tonsillar lymphoid cells, non-neoplastic	Raji	Human	Lymphoma, Burkitt	Nelson-Rees et al, 1981	6451928
TE-12	Human	Esophageal squamous cell carcinoma	TE-2, TE-3, TE-12 or TE-13 (genetically identical)	Human	Esophageal squamous cell carcinoma	Boonstra et al, 2007	17804709
TE-13	Human	Esophageal squamous cell carcinoma	TE-2, TE-3, TE-12 or TE-13 (genetically identical)	Human	Esophageal squamous cell carcinoma	Boonstra et al, 2007	17804709

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
TE-2	Human	Esophageal squamous cell carcinoma	TE-2, TE-3, TE-12 or TE-13 (genetically identical)	Human	Esophageal squamous cell carcinoma	Boonstra et al, 2007	17804709
TE-3	Human	Esophageal squamous cell carcinoma	TE-2, TE-3, TE-12 or TE-13 (genetically identical)	Human	Esophageal squamous cell carcinoma	Boonstra et al, 2007	17804709
TE671	Human	Medulloblastoma	RD	Human	Sarcoma (rhabdomyosarcoma)	Stratton et al, 1989; Chen et al, 1989	2650908, 2739733
TE671 Subline No.2	Human	Medulloblastoma	RD	Human	Sarcoma (rhabdomyosarcoma)	ECACC website, ATCC FAQ #1063	No PMID
TE-7	Human	Esophageal adenocarcinoma	TE-2, TE-3, TE-12 or TE-13 (genetically identical)	Human	Esophageal squamous cell carcinoma	Boonstra et al, 2007	17804709
TEC61	Human	Thyroid, endothelium	JEG3	Human	Choriocarcinoma	Patel et al, 2003 [retraction]	12388152 [retraction]
TK-1	Human	Glioblastoma	U-251 MG	Human	Glioblastoma	JCRB website	No PMID
TI-1	Human	Leukemia, acute myeloid, M2	K-562	Human	Leukemia, chronic myeloid, blast crisis	Rush et al, 2002; Drexler et al, 2003	11871388, 12592342
TMH-1	Human	Thyroid, benign goitre	IHH-4	Human	Thyroid, papillary thyroid carcinoma	JCRB website	No PMID
TMM	Human	Leukemia, chronic myeloid, blast crisis	Correct name, incorrect cell type	Human	EBV+ B-lymphoblastoid cell line	Drexler et al, 2003	12592342
TSU-Pr1	Human	Prostate carcinoma	T-24	Human	Bladder carcinoma	van Bokhoven et al, 2001	11522622
Tu-138	Human	Oral squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
Tu-158LN	Human	Oropharyngeal squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
Tu-159	Human	Oropharyngeal squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
Tu-167	Human	Oral squamous cell carcinoma	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
Tu-182	Human	Oropharyngeal squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
Tu-212	Human	Hypopharyngeal squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
Tu-212LN	Human	Hypopharyngeal squamous cell carcinoma (lymph node)	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
TuWi	Human	Kidney, Wilms' tumor	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	6451928
U-118 MG	Human	Glioblastoma	U-138 MG	Human	Glioblastoma	ATCC website	No PMID
UM-UC-2	Human	Bladder carcinoma	T-24	Human	Bladder carcinoma	Chiong et al, 2009	19375735
UM-UC-3-GFP (UM-UC-3 derivative)	Human	Bladder carcinoma, GFP-transfected	Unknown, NOT UM-UC-3	Human	Unknown	Chiong et al, 2009	19375735
UPES/C	Human	Brain, non-neoplastic astrocytes	Unknown	Rat	Unknown	Higgins et al, 2010	20951163
UPHHJA	Human	Glioblastoma	Unknown	Rat	Unknown	Higgins et al, 2010	20951163
UTMB-460	Human	B-cells	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
VC312R	Human	Medulloblastoma	Unknown	Mixed, human + mouse	Unknown	Higgins et al, 2010	20951163
VM-CUB-III	Human	Bladder carcinoma	VM-CUB-I	Human	Bladder carcinoma	Masters et al, 1986	3708594
WiDr	Human	Colon carcinoma	HT-29	Human	Colon carcinoma	Chen et al, 1987	3472642
WISH	Human	Amnion, normal cells	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
WKD	Human	Conjunctiva	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
Wong-Kilbourne	Human	Conjunctiva	HeLa	Human	Cervical adenocarcinoma	Lavappa, 1978; Nelson-Rees et al, 1981	566722, 6451928
WRL 68	Human	Liver, embryonic cells	HeLa	Human	Cervical adenocarcinoma	ECACC website	No PMID
WSU-ALCL	Human	Lymphoma, anaplastic large cell	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
WSU-CLL	Human	Leukemia, chronic lymphocytic	REH	Human	Leukemia, acute lymphoblastic, B cell precursor	Drexler et al, 2002; Drexler et al, 2003	12200708, 12592342
YAA	Human	Monocytes	U-937	Human	Lymphoma, histiocytic	Drexler et al, 2003	12592342
YAP	Human	Monocytes	U-937	Human	Lymphoma, histiocytic	Drexler et al, 2003	12592342
YJ	Human	Leukemia, chronic myelomonocytic	HL-60	Human	Leukemia, acute myeloid, M2	Drexler et al, 2003	12592342
YMB-1	Human	Breast carcinoma	ZR-75-1	Human	Breast carcinoma	Personal communication, A. Capes-Davis	No PMID
YMB-1-E	Human	Breast carcinoma	ZR-75-1	Human	Breast carcinoma	Personal communication, A. Capes-Davis	No PMID

Cross-contamination has been reported in the following cell lines but authentic stocks apparently do exist.  
 As with any imported cell line check identity on receipt or obtain from authenticated stock, e.g. from a reputable cell bank.

**Table 2. Cross-contaminated or Misidentified Cell Lines where Authentic Stock May Exist**

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
1483	Human	Oral squamous cell carcinoma	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
183	Human	Oropharyngeal squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
207 (EU-2)	Human	Leukemia, acute lymphoblastic, B cell precursor	REH and SUP-B2	Human	Leukemia, acute lymphoblastic, B cell precursor	MacLeod et al, 1999; Drexler et al, 2003	10508494, 12592342
B10XI	Chicken, <i>Gallus gallus</i>	Intestinal cells	Unknown	Pig, <i>Sus scrofa</i>	Unknown	Steube et al, 2011	22193509
B6	Chicken, <i>Gallus gallus</i>	Intestinal cells, small intestine	Unknown	Pig, <i>Sus scrofa</i>	Unknown	Steube et al, 2011	22193509
BJA-B	Human	Bladder carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees & Flandermeier, 1976	1246601
BT-20	Human	Breast carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
Ca9-22	Human	Oral squamous cell carcinoma	MSK-922	Human	Laryngeal squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
D-17	Dog, <i>Canis familiaris</i>	Sarcoma (osteosarcoma)	Moresco	Dog	Sarcoma (osteosarcoma)	O'Donoghue et al, 2011	21908323
EB-3	Human	Lymphoma, Burkitt	Daudi	Human	Lymphoma, Burkitt	JCRB website	No PMID
FU-RPNT-2	Human	Kidney, renal primitive neuroectodermal tumor	FU-RPNT-1	Human	Kidney, renal primitive neuroectodermal tumor	RIKEN website	No PMID
Grey	Dog, <i>Canis familiaris</i>	Sarcoma (osteosarcoma)	Unknown	Human	Unknown	O'Donoghue et al, 2011	21908323
HPB-ALL	Human	Leukemia, acute lymphoblastic, T cell	JURKAT	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
IPEC	Pig, <i>Sus scrofa</i>	Intestinal cells	Unknown	Cow	Unknown	Steube et al, 2011	22193509
J-82	Human	Bladder carcinoma	T-24	Human	Bladder carcinoma	Masters et al, 1986	3708594
JHH-1	Human	Liver, hepatocellular carcinoma	Unknown	Mouse	Unknown	JCRB website	No PMID
KARPAS-45	Human	Leukemia, acute lymphoblastic, T cell	Unknown	Human	Unknown	Drexler et al, 1999	10516762
KBM-3	Human	Leukemia, acute myeloid, M4	HL-60	Human	Leukemia, acute myeloid, M2	Drexler et al, 2003	12592342
KE-37	Human	Leukemia, acute lymphoblastic, T cell	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 1999	10516762
L-540	Human	Lymphoma, Hodgkin	CCRF-CEM	Human	Leukemia, acute lymphoblastic, T cell	Drexler et al, 2003	12592342
MB-02	Human	Leukemia, acute myeloid, M7	HU-3	Human	Leukemia, acute myeloid, M7	Drexler et al, 1999	10516762
MDA1986LN	Human	Oral squamous cell carcinoma (lymph node)	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
MDA686LN	Human	Oropharyngeal squamous cell carcinoma (lymph node)	UM-SCC-1	Human	Oral squamous cell carcinoma (recurrence)	Zhao et al, 2011	21868764
MDA686TU	Human	Oropharyngeal squamous cell carcinoma	T404, T406, Tu-138, Tu-158LN, Tu-159, Tu-182, Tu-212, Tu-212LN (genetically identical)	Human	Head and neck squamous cell carcinoma	Zhao et al, 2011	21868764
Parks	Dog, <i>Canis familiaris</i>	Melanoma	Unknown	Human	Unknown	O'Donoghue et al, 2011	21908323
RPMI-8402	Human	Leukemia, acute lymphoblastic, T cell	Unknown	Human	Unknown	Drexler et al, 1999	10516762
RT4	Human	Bladder carcinoma	HeLa	Human	Cervical adenocarcinoma	Nelson-Rees et al, 1981	6451928
T3M-12	Human	Lung carcinoma	T3M-1	Human	Oral carcinoma	RIKEN website	No PMID
U-373 MG	Human	Glioblastoma	U-251 MG	Human	Glioblastoma	ECACC website; ATCC website	No PMID
U-937	Human	Lymphoma, histiocytic	Unknown	Human	Unknown	Drexler et al, 1999	10516762

Misidentified Cell Line	Claimed Species	Claimed Cell Type	Contaminating Cell Line	Actual Species	Actual Cell Type	Misidentification Reported By	Reference PubMed ID
UT-7	Human	Leukemia, acute myeloid, M7	U-937	Human	Lymphoma, histiocytic	Drexler et al, 2003	12592342
Yamada	Dog, <i>Canis familiaris</i>	Sarcoma (osteosarcoma)	Unknown	Mouse	Unknown	O'Donoghue et al, 2011	21908323



### Cell Banks Cited

Name	Website
ATCC: American Type Culture Collection	<a href="http://www.atcc.org/">http://www.atcc.org/</a>
DSMZ: Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH	<a href="http://www.dsmz.de/">http://www.dsmz.de/</a>
ECACC: European Collection of Cell Cultures	<a href="http://www.hpacultures.org.uk/collections/ecacc.jsp">http://www.hpacultures.org.uk/collections/ecacc.jsp</a>
JCRB: Japanese Collection of Research Bioresources	<a href="http://cellbank.nibio.go.jp/">http://cellbank.nibio.go.jp/</a>
RIKEN Bioresource Center Cell Bank	<a href="http://www.brc.riken.go.jp/lab/cell/english/guide.shtml">http://www.brc.riken.go.jp/lab/cell/english/guide.shtml</a>

### References

PubMed ID	Reference
17254797	Azari S, Ahmadi N, Tehrani MJ, Shokri F. Profiling and authentication of human cell lines using short tandem repeat (STR) loci: Report from the National Cell Bank of Iran. <i>Biologicals</i> 2007; 35: 195-202.
17804709	Boonstra JJ, van der Velden AW, Beerens EC, van Marion R, Morita-Fujimura Y, Matsui Y, Nishihira T, Tselepis C, Hainaut P, Lowe AW, Beverloo BH, van Dekken H, Tilanus HW, Dinjens WN. Mistaken identity of widely used esophageal adenocarcinoma cell line TE-7. <i>Cancer Res</i> 2007; 67: 7996-8001.
20075370	Boonstra JJ, van Marion R, Beer DG, Lin L, Chaves P, Ribeiro C, Pereira AD, Roque L, Darnton SJ, Altorki NK, Schrupp DS, Klimstra DS, Tang LH, Eshleman JR, Alvarez H, Shimada Y, van Dekken H, Tilanus HW, Dinjens WN. Verification and unmasking of widely used human esophageal adenocarcinoma cell lines. <i>J Natl Cancer Inst</i> 2010; 102: 271-4.
21253487	Brüderlein S, Sommer JB, Meltzer PS, Li S, Osada T, Ng D, Möller P, Alcorta DA, Kelley MJ. Molecular characterization of putative chordoma cell lines. <i>Sarcoma</i> 2010; 2010: 630129.
8428522	Chen TR. Chromosome identity of human prostate cancer cell lines, PC-3 and PPC-1. <i>Cytogenet Cell Genet</i> 1993; 62: 183-4.
2739733	Chen TR, Dorotinsky C, Macy M, Hay R. Cell identity resolved. <i>Nature</i> 1989; 340: 106.
3472642	Chen TR, Drabkowski D, Hay RJ, Macy M, Peterson W Jr. WiDr is a derivative of another colon adenocarcinoma cell line, HT-29. <i>Cancer Genet Cytogenet</i> 1987; 27: 125-34.
19375735	Chiong E, Dadbin A, Harris LD, Sabichi AL, Grossman HB. The Use of Short Tandem Repeat Profiling to Characterize Human Bladder Cancer Cell Lines. <i>J Urol</i> 2009; 181: 2737-48.
8105864	Christensen B, Hansen C, Debiec-Rychter M, Kieler J, Ottensen S, Schmidt J. Identity of tumorigenic human urothelial cell lines and 'spontaneously' transformed sublines. <i>Br J Cancer</i> 1993; 68: 879-84.
7905254	Christensen B, Hansen C, Kieler J, Schmidt J. Identity of non-malignant human urothelial cell lines classified as transformation grade I (TGrl) and II (TGrlI). <i>Anticancer Res</i> 1993; 13: 2187-91.
17786032	Christgen M, Lehmann U. MDA-MB-435: the questionable use of a melanoma cell line as a model for human breast cancer is ongoing. <i>Cancer Biol Ther</i> 2007; 6: 1355-7.
10614862	Dirks WG, MacLeod RA, Drexler HG. ECV304 (endothelial) is really T24 (bladder carcinoma): cell line cross-contamination at source. <i>In Vitro Cell Dev Biol Anim</i> 1999; 35: 558-9.
7682880	Drexler HG. Recent results on the biology of Hodgkin and Reed-Sternberg cells. II. Continuous cell lines. <i>Leuk Lymphoma</i> 1993; 9: 1-25.
10516762	Drexler HG, Dirks WG, MacLeod RA. False human hematopoietic cell lines: cross-contaminations and misinterpretations. <i>Leukemia</i> 1999; 13: 1601-7.
19344951	Drexler HG, Dirks WG, MacLeod RA. Many are called MDS cell lines: One is chosen. <i>Leuk Res</i> 2009; 33: 1011-6.
12592342	Drexler HG, Dirks WG, Matsuo Y, MacLeod RA. False leukemia-lymphoma cell lines: an update on over 500 cell lines. <i>Leukemia</i> 2003; 17: 416-26.
11732505	Drexler HG, MacLeod RA, Dirks WG. Cross-contamination: HS-Sultan is not a myeloma but a Burkitt lymphoma cell line. <i>Blood</i> 2001; 98: 3495-6.
12200708	Drexler HG, Quentmeier H, Dirks WG, Uphoff CC, MacLeod RA. DNA profiling and cytogenetic analysis of cell line WSU-CLL reveal cross-contamination with cell line REH (pre B-ALL). <i>Leukemia</i> 2002; 16: 1868-70.
10949990	Durkin AS, Cedrone E, Sykes G, Boles D, Reid YA. Utility of gender determination in cell line identity. <i>In Vitro Cell Dev Biol Anim</i> 2000; 36: 344-7.
20959409	Ellis LM, Samuel S, Sceusi E. Varying Opinions on the Authenticity of a Human Midgut Carcinoid Cell Line - Letter. <i>Clin Cancer Res</i> 2010; 16: 5365-6.
12354931	Ellison G, Klinowska T, Westwood RF, Docter E, French T, Fox JC. Further evidence to support the melanocytic origin of MDA-MB-435. <i>Mol Pathol</i> 2002; 55: 294-9.
4864103	Gartler, SM. Genetic markers as tracers in cell culture. <i>Natl Cancer Inst Monogr</i> 1967; 26: 167-95.
8220135	Gignac SM, Steube K, Schleithoff L, Janssen JW, MacLeod RA, Quentmeier H, Drexler HG. Multiparameter approach in the identification of cross-contaminated leukemia cell lines. <i>Leuk Lymphoma</i> 1993; 10: 359-68.
4402510	Greene AE, Charney J, Nichols WW, Coriell LL. Species identity of insect cell lines. <i>In Vitro</i> 1972; 7: 313-22.
7192801	Harris NL, Gang DL, Quay SC, Poppema S, Zamecnik PC, Nelson-Rees WA, O'Brien SJ. Contamination of Hodgkin's disease cell cultures. <i>Nature</i> 1981; 289: 228-30.
20951163	Higgins SC, Steingrimsdottir H, Pilkington GJ. Human, mouse or rat? Species authentication of glioma-derived cell cultures. <i>J Neurosci Methods</i> 2010; 194: 139-43.
1730567	Honma M, Kataoka E, Ohnishi K, Ohno T, Takeuchi M, Nomura N, Mizusawa H. A new DNA profiling system for cell line identification for use in cell banks in Japan. <i>In Vitro Cell Dev Biol</i> 1992; 28A: 24-8.
11869090	Kniss DA, Xie Y, Li Y, Kumar S, Linton EA, Cohen P, Fan-Havard P, Redman CW, Sargent IL. ED(27) trophoblast-like cells isolated from first-trimester chorionic villi are genetically identical to HeLa cells yet exhibit a distinct phenotype. <i>Placenta</i> 2002; 23: 32-43.

PubMed ID	Reference
1250349	Lavappa KS, Macy ML, Shannon JE. Examination of ATCC stocks for HeLa marker chromosomes in human cell lines. <i>Nature</i> 1976; 259: 211-3.
566722	Lavappa KS. Survey of ATCC stocks of human cell lines for HeLa contamination. <i>In Vitro</i> 1978; 14: 469-475.
21938590	Lee LE, Bufalino MR, Christie AE, Frischer ME, Soin T, Tsui CK, Hanner RH, Smaghe G. Misidentification of OLGA-PH-J/92, believed to be the only crustacean cell line. <i>In Vitro Cell Dev Biol Anim</i> 2011; 47: 665-674.
4027986	Lin CW, Lin JC, Prout GR Jr. Establishment and characterization of four human bladder tumor cell lines and sublines with different degrees of malignancy. <i>Cancer Res</i> 1985; 45: 5070-9.
16504380	Liscovitch M, Ravid D. A case study in misidentification of cancer cell lines: MCF-7/AdrR cells (re-designated NCI/ADR-RES) are derived from OVCA8 human ovarian carcinoma cells. <i>Cancer Lett</i> 2007; 245: 350-2.
19372543	Lorenzi PL, Reinhold WC, Varma S, Hutchinson AA, Pommier Y, Chanock SJ, Weinstein JN. DNA fingerprinting of the NCI-60 cell line panel. <i>Mol Cancer Ther</i> 2009; 8: 713-24.
10508494	MacLeod RA, Dirks WG, Matsuo Y, Kaufmann M, Milch H, Drexler HG. Widespread intraspecies cross-contamination of human tumor cell lines arising at source. <i>Int J Cancer</i> 1999; 83: 555-63.
9447816	MacLeod RA, Dirks WG, Reid YA, Hay RJ, Drexler HG. Identity of original and late passage Dami megakaryocytes with HEL erythroleukemia cells shown by combined cytogenetics and DNA fingerprinting. <i>Leukemia</i> 1997; 11: 2032-8.
3708594	Masters JR, Hepburn PJ, Walker L, Highman WJ, Trejdosiowicz LK, Povey S, Parkar M, Hill BT, Riddle PR, Franks LM. Tissue culture model of transitional cell carcinoma: characterization of twenty-two human urothelial cell lines. <i>Cancer Res</i> 1986; 46: 3630-6.
11416159	Masters JR, Thomson JA, Daly-Burns B, Reid YA, Dirks WG, Packer P, Toji LH, Ohno T, Tanabe H, Arlett CF, Kelland LR, Harrison M, Virmani A, Ward TH, Ayres KL, Debenham PG. Short tandem repeat profiling provides an international reference standard for human cell lines. <i>Proc Natl Acad Sci U S A</i> 2001; 98: 8012-7.
2903855	Matsuba I, Lernmark A, Madsen O, Michelsen B, Nielsen JH, Scholler J, Vissing H, Welinder B, Tommerup N, Mikkelsen M, et al. Gene probes to detect cross-culture contamination in hormone producing cell lines. <i>In Vitro Cell Dev Biol</i> 1988; 24: 1071-6.
15771911	Melcher R, Maisch S, Koehler S, Bauer M, Steinlein C, Schmid M, Kudlich T, Schaubert J, Luehrs H, Menzel T, Scheppach W. SKY and genetic fingerprinting reveal a cross-contamination of the putative normal colon epithelial cell line NCOL-1. <i>Cancer Genet Cytogenet</i> 2005; 158: 84-7.
14505435	Milanesi E, Ajmone-Marsan P, Bignotti E, Losio MN, Bernardi J, Chegdani F, Soncini M, Ferrari M. Molecular detection of cell line cross-contaminations using amplified fragment length polymorphism DNA fingerprinting technology. <i>In Vitro Cell Dev Biol Anim</i> 2003; 39: 124-30.
12740908	Moseley GW, Elliott J, Wright MD, Partridge LJ, Monk PN. Interspecies contamination of the KM3 cell line: implications for CD63 function in melanoma metastasis. <i>Int J Cancer</i> 2003; 105: 613-6.
562836	Nelson-Rees WA. MA160 and HeLa cell lines. <i>In Vitro</i> 1977; 13: 525.
535908	Nelson-Rees WA. Prostatic acid phosphatase in cell lines MA 160, EB33 and HeLa cells. <i>In Vitro</i> 1979; 15: 935.
6451928	Nelson-Rees WA, Daniels DW, Flandermeyer RR. Cross-contamination of cells in culture. <i>Science</i> 1981; 212: 446-52.
1246601	Nelson-Rees WA, Flandermeyer RR. HeLa cultures defined. <i>Science</i> 1976; 191: 96-8.
7394535	Nelson-Rees WA, Flandermeyer RR, Daniels DW. T-1 cells are HeLa and not of normal human kidney origin. <i>Science</i> 1980; 209: 719-20.
21908323	O'Donoghue LE, Rivest JP, Duval DL. Polymerase chain reaction-based species verification and microsatellite analysis for canine cell line validation. <i>J Vet Diagn Invest</i> 2011; 23: 780-785.
9556756	Ogura H, Fujii R, Hamano M, Kuzuya M, Nakajima H, Ohata R, Mori T. Detection of HeLa cell contamination--presence of human papillomavirus 18 DNA as HeLa marker in JTC-3, OG and OE cell lines. <i>Jpn J Med Sci Biol</i> 1997; 50: 161-7.
8397027	Ogura H, Yoshinouchi M, Kudo T, Imura M, Fujiwara T, Yabe Y. Human papillomavirus type-18 DNA in so-called HEP-2-cells. KB-cells and F1-cells - further evidence that these cells are HeLa-cell derivatives. <i>Cell Mol Biol (Noisy-le-grand)</i> 1993; 39: 463-7.
6823318	O'Toole CM, Povey S, Hepburn P, Franks LM. Identity of some human bladder cancer cell lines. <i>Nature</i> 1983; 301: 429-30.
11135436	Pan Y, Lui WO, Nuppenon N, Larsson C, Isola J, Visakorpi T, Bergerheim US, Kytölä S. 5q11, 8p11, and 10q22 are recurrent chromosomal breakpoints in prostate cancer cell lines. <i>Genes Chromosomes Cancer</i> 2001; 30: 187-95.
12388152	Patel VA, Logan A, Watkinson JC, Uz-Zaman S, Sheppard MC, Ramsden JD, Eggo MC. Isolation and characterization of human thyroid endothelial cells [retraction]. <i>Am J Physiol Endocrinol Metab</i> 2009; 297: E562.
7579375	Pelilat-Deceunynk C, Amiot M, Bataille R, Van Riet I, Van Camp B, Omede P, Boccadoro M. Human myeloma cell lines as a tool for studying the biology of multiple myeloma: a reappraisal 18 years after. <i>Blood</i> 1995; 86: 4001-2.
19002917	Perry GM, McDonald GJ, Ferguson MM, Ganassin RC, Bols NC. Characterization of rainbow trout cell lines using microsatellite DNA profiling. <i>Cytotechnology</i> 2001; 37: 143-51.
19557180	Phuchareon J, Ohta Y, Woo JM, Eisele DW, Tetsu O. Genetic profiling reveals cross-contamination and misidentification of 6 adenoid cystic carcinoma cell lines: ACC2, ACC3, ACCM, ACCNS, ACCS and CAC2. <i>PLoS One</i> 2009; 4: e6040.
17004106	Rae JM, Creighton CJ, Meck JM, Haddad BR, Johnson MD. MDA-MB-435 cells are derived from M14 melanoma cells--a loss for breast cancer, but a boon for melanoma research. <i>Breast Cancer Res Treat</i> 2007; 104: 13-9.
19087340	Ribeiro FR, Meireles AM, Rocha AS, Teixeira MR. Conventional and molecular cytogenetics of human non-medullary thyroid carcinoma: characterization of eight cell line models and review of the literature on clinical samples. <i>BMC Cancer</i> 2008; 8: 371.
11871388	Rush LJ, Heinonen K, Mrózek K, Wolf BJ, Abdel-Rahman M, Szymanska J, Peltomäki P, Kapadia F, Bloomfield CD, Caligiuri MA, Plass C. Comprehensive cytogenetic and molecular genetic characterization of the T1-1 acute myeloid leukemia cell line reveals cross-contamination with K-562 cell line. <i>Blood</i> 2002; 99: 1874-6.
11433418	Schmelz M, Cress AE, Barrera J, McDaniel KM, Davis TL, Fuchs L, Dalkin BL, Nagle RB. PEAZ-1: a new human prostate neoplastic epithelial cell line [erratum]. <i>Prostate</i> . 2004; 61: 375.
18713817	Schweppe RE, Klopper JP, Korch C, Pugazhenthii U, Benezra M, Knauf JA, Fagin JA, Marlow LA, Copland JA, Smallridge RC, Haugen BR. Deoxyribonucleic Acid profiling analysis of 40 human thyroid cancer cell lines reveals cross-contamination resulting in cell line redundancy and misidentification. <i>J Clin Endocrinol Metab</i> 2008; 93: 4331-41.
20200241	Silversides DW, Music N, Jacques M, Webby R, Gagnon CA. Species origin investigation of the St. Jude porcine lung epithelial cell line (SJPL) made available to researchers. <i>J Virol</i> 2010; 84: 5454-5.
15548687	Staege MS, Hutter C, Neumann I, Foja S, Hattenhorst UE, Hansen G, Afar D, Burdach SE. DNA microarrays reveal relationship of Ewing family tumors to both endothelial and fetal neural crest-derived cells and define novel targets. <i>Cancer Res</i> 2004; 64: 8213-21.
22193509	Steube KG, Koelz AL, Uphoff CC, Drexler HG, Kluess J, Steinberg P. The necessity of identity assessment of animal intestinal cell lines: A case report. <i>Cytotechnology</i> 2011. Epub Dec 23.
2650908	Stratton MR, Darling J, Pilkington GJ, Lantos PL, Reeves BR, Cooper CS. Characterization of the human cell line TE671. <i>Carcinogenesis</i> 1989; 10: 899-905.
No PMID	Suzuki T., Sekiguchi, M. (1999). Gastric cancer. In: <i>Human Cell Culture Vol II</i> , Masters JRW & Pailson, B, eds., Kluwer Academic Publishers, Dordrecht, pp257-291.
15679051	Thompson EW, Waltham M, Ramus SJ, Hutchins AM, Armes JE, Campbell IG, Williams ED, Thompson PR, Rae JM, Johnson MD, Clarke R. LCC15-MB cells are MDA-MB-435: a review of misidentified breast and prostate cell lines. <i>Clin Exp Metastasis</i> 2004; 21: 535-41.
12453433	Unger RE, Krump-Konvalinkova V, Peters K, Kirkpatrick CJ. In Vitro Expression of the Endothelial Phenotype: Comparative Study of Primary Isolated Cells and Cell Lines, Including the Novel Cell Line HPMEC-ST1.6R. <i>Microvasc Res</i> 2002; 64: 384-97.

PubMed ID	Reference
11522622	van Bokhoven A, Varella-Garcia M, Korch C, Miller GJ. TSU-Pr1 and JCA-1 cells are derivatives of T24 bladder carcinoma cells and are not of prostatic origin. <i>Cancer Res</i> 2001; 61: 6340-4.
14518029	van Bokhoven A, Varella-Garcia M, Korch C, Johannes WU, Smith EE, Miller HL, Nordeen SK, Miller GJ, Lucia MS. Molecular characterization of human prostate carcinoma cell lines. <i>Prostate</i> 2003; 57: 205-25.
3167823	van Helden PD, Wiid IJ, Albrecht CF, Theron E, Thornley AL, Hoal-van Helden EG. Cross-contamination of human esophageal squamous carcinoma cell lines detected by DNA fingerprint analysis. <i>Cancer Res</i> 1988; 48: 5660-2.
12619888	van Pelt JF, Decorte R, Yap PS, Fevery J. Identification of HepG2 variant cell lines by short tandem repeat (STR) analysis. <i>Mol Cell Biochem</i> 2003; 243: 49-54.
17804723	van Staveren WC, Solis DW, Delys L, Duprez L, Andry G, Franc B, Thomas G, Libert F, Dumont JE, Detours V, Maenhaut C. Human thyroid tumor cell lines derived from different tumor types present a common dedifferentiated phenotype. <i>Cancer Res</i> 2007; 67: 8113-20.
11433521	Varella-Garcia M, Boomer T, Miller GJ. Karyotypic similarity identified by multiplex-FISH relates four prostate adenocarcinoma cell lines: PC-3, PPC-1, ALVA-31, and ALVA-41. <i>Genes Chromosomes Cancer</i> 2001; 31: 303-15.
6244232	Williams RD. Human urologic cancer cell lines. <i>Invest Urol</i> 1980; 17: 359-63.
8795574	Wilson AP, Dent M, Pejovic T, Hubbard L, Radford H. Characterisation of seven human ovarian tumour cell lines. <i>Br J Cancer</i> 1996; 74: 722-7.
16643607	Yoshino K, Iimura E, Saijo K, Iwase S, Fukami K, Ohno T, Obata Y, Nakamura Y. Essential role for gene profiling analysis in the authentication of human cell lines. <i>Hum Cell</i> 2006; 19: 43-8.
21868764	Zhao M, Sano D, Pickering CR, Jasser SA, Henderson YC, Clayman GL, Sturgis EM, Ow TJ, Lotan R, Carey TE, Sacks PG, Grandis JR, Sidransky D, Helden NE, Myers JN. Assembly And Initial Characterization Of A Panel Of 85 Genomically Validated Cell Lines From Diverse Head And Neck Tumor Sites. <i>Clin Cancer Res</i> 2011; 17: 7248.