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Cell line information V.2

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We use this protocol and it's working

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Abstract

An amalgamation of cell line data in the lab. Its origin and standard culture conditions.

Materials

MATERIALS

A549 **ATCC Catalog #**CCL-185

Troubleshooting

Overview

1 All cells are maintained in humidified incubators at 37°C, 5% CO_2, unless otherwise specified.

All cells are routinely tested for mycoplasma infection using a PCR-based test (Universal Mycoplasma Detection Kit, ATCC Cat. No. 30-1012K)

Dates of purchase are provided. Aliquots of purchased cells lines are frozen at P0, P1 and P2 from original stocks and P2 are defrosted and used for experimentation as standard.

Cell lines confirmed by short tandem repeat analysis are marked with *.

2 Media for cell lines:

R10: RPMI (Gibco Cat. No. 2240-089) + 10% fetal bovine serum (Gibco Cat. No. 26140079) + 100 U/mL Penicillin and Streptomycin (Gibco Cat. No. 15140122)
D10: DMEM (Corning Cat. No. MT10013CV) + 10% fetal bovine serum (Gibco Cat. No. 26140079) + 100 U/mL Penicillin and Streptomycin (Gibco Cat. No. 15140122)
D10-SP (without sodium pyruvate): DMEM (Corning Cat. No. 10-017-CV) + 10% fetal bovine serum (Gibco Cat. No. 26140079) + 100 U/mL Penicillin and Streptomycin (Gibco Cat. No. 15140122).

Adherent cells are passaged using trypsin (0.05%, Gibco Cat. No. 25300054)

Lung

3 Non-small cell lung cancers:

Lung adenocarcinomas:
1. A549 (RRID:CVCL_0023) was purchased from the American Type Culture Collection (ATCC) in March 2019; grown in R10 and split 1/20 twice per week.
2. NCI-H322 (RRID:CVCL_1556; purchased May 2019, Sigma Aldrich) grown in R10 and split 1/3 to 1/6 twice per week.
3. NCI-H522 (RRID: CVCL_1567) grown in R10 and split 1/3 to 1/6 twice per week.

Large cell lung carcinoma:
1. NCI-H460 (RRID:CVCL_0459; purchased June 2019, ATCC) grown in R10 and split 1/8 three times per week.

Mesothelioma

4 Pleural epithelioid mesothelioma:
1. NCI-H2452 (RRID:CVCL_1553)
2. NCI-H226 (RRID:CVCL_1544) obtained by Dan Vallera's lab in 2009.
3. NCI-H2461(RRID:CVCL_A536) grown in R10 and split 1/20 twice per week.
4. YOU (Gift of Raffit Hassan, 2021, see Li et al. http://www.ncbi.nlm.nih.gov/pubmed/15274292) grown in R10 and split 1/4 twice a week.
5. HAY (Gift of Raffit Hassan, 2021, see Li et al. http://www.ncbi.nlm.nih.gov/pubmed/15274292) grown in R10 and split 1/4 twice per week.
5. HAY-luciferase/GFP created by Blake Jacobson, Manish Patel's lab, 2021) grown in R10 with 2µg/mL blasticidin for selection of the GFP/luciferase.
6. ORT (Gift of Raffit Hassan, 2021, see Li et al. http://www.ncbi.nlm.nih.gov/pubmed/15274292) grown in R10 and split 1/2 twice per week.
7. ROB (Gift of Raffit Hassan, 2021, see Li et al. http://www.ncbi.nlm.nih.gov/pubmed/15274292) grown in R10 and split 1/4 twice per week.
8. PET (Gift of Raffit Hassan, 2021, see Li et al. http://www.ncbi.nlm.nih.gov/pubmed/15274292) grown in R10 and split 1/2 twice per week.

Sarcomatoid mesothelioma:
1. NCI-H2596(RRID:CVCL_A546) grown in R10 and split 1/20 twice per week.
2. NCI-H2691(RRID:CVCL_A551)
3. NCI-H2373(RRID:CVCL_A533) grown in R10 and split 1/5 twice per week.

Breast

5 Breast adenocarcinoma:
1. MDA-MB-231 (RRID: CVCL_0062) - triple negative breast cancer

Leukemia

6 Chronic myelogenous leukemia
1. K562 (RRID:CVCL_0004; purchased March 2015, Cat. No. CCL-243, ATCC) cultured in R10, split down to 1×10^5 cells/mL three times per week.

Acute myeloid leukemia
1. HL-60 (RRID:CVCL_0002; purchased from April 2017, Cat. No. CCL-240, ATCC) grown in R10, split down to 2×10^5 cells/mL two to three times per week.

Childhood acute monocytic leukemia
1. THP-1 (RRID:CVCL_0006; purchased December 2015, Cat. No. TIB-202, ATCC) cultured in R10 with 50µM β-mercaptoethanol. Split down to 2-4×10^5 cells/mL. Subculture when cell concentration reaches 8×10^5 cells/mL. Do not allow the cell concentration to exceed 1×10^6 cells/mL.
2. MV-4-11 (RRID:CVCL_0064; purchased February 2015, Cat. No. CRL-9591, ATCC)

Plasma cell myeloma
1. MM1.S (RRID:CVCL_8792; purchased December 2021, Cat. No. CRL-2974, ATCC) cultured in R10. Scrape to split 1/2 twice or three times per week. Spin at 125g 5min.

Lymphoma

7 Epstein-Barr virus-related Burkitt lymphoma
1. Raji (RRID:CVCL_0511; purchased March 2015, Cat. No. CCL-86, ATCC) cultured in R10, split down to 4 ×10^5 cells/mL three times per week.
2. Daudi (RRID:CVCL_0008; purchased April 2018, Cat. No. CCL-213, ATCC) cultured in R10, split down to 3-5×10^5 cells/mL; should not exceed 3×10^6 cells/mL.

Gut

8 Colon adenocarcinoma
1. CaCO-2 (RRID: CVCL_0025) purchased from ATCC before 2016 (Schohl et al. Targeted Oncology, 2016, doi:10.1007/s11523-015-0391-8)
Cultured in Eagle's Minimum Essential Medium (ATCC Cat. No. 30-2003) + 20% fetal bovine serum (Gibco Cat. No. 26140079) + 100 U/mL Penicillin and Streptomycin (Gibco Cat. No. 15140122); split 1/2 once per week.
2. HT29 (RRID:CVCL_0320; purchase May 2022, Cat. HTB-38, ATCC)
P0 to P2 were cultured in McCoy's 5A medium modified (30-2007, ATCC); P3 onwards grown in R10. All split 1/8 3 times per week.

Endometrium

9 Endometrial adenocarcinoma
1. Ishikawa 3-H-12 (same as ECC-1) sensitive
2. Ishikawa 3-H-12 (same as ECC-1) resistant

NK cell lines

10 Malignant non-Hodgkin's lymphoma

1. NK-92 (RRID:CVCL_2142; purchased December 2015, Cat. No. CRL-2407, ATCC) (see also *Assessing IL-15 bioavailability - 'the bioassay'*) NK-92 are maintained in Alpha Minimum Essential Medium plus ribonucleosides and deoxyribonucleosides (12571, Gibco), β-mercaptoethanol (0.1mM, M7522, Sigma Aldrich), recombinant human IL-2 (500U/mL, NDC 65483-116-07, Prometheus), horse serum (12.5%, 26050088, Fisher Scientific), fetal bovine serum (12.5%, 26140079, Gibco), Penicillin and Streptomycin (100U/ml, 15140122, Gibco). Split down to 2×10^5 - 3×10^5 cells/mL three times per week. NK-92 freezing medium: 50% FBS; 40% NK92 media; 10% DMSO. Freeze no more than 5×10^6 cells/mL

T cell lines

11 Childhood T lymphoblastic leukemia
1. Jurkat clone E6.1 (RRID:CVCL_0367; purchased June 2015, Cat No. TIB-152, ATCC)

Miscellaneous

12 Mouse mast cell neoplasm
1. P815 (ATCC Cat. No. TIB-64, purchased August 2017, RRID:CVCL_2154) cultured in D10; split down to 1 $\times10^5$ cells/mL three times per week.

13 Human Dermal Microvascular Endothelial Cells
1. HDMEC (Sigma Aldrich Cat. No. S100-05A)
Human Microvascular Endothelial Cells - Lung
1. HMVEC-L (Lonza Cat. No. CC-2527)

14 Renal clear cell carcinoma
1. Caki-1 (RRID:CVCL_0234; purchased July 2018, Cat. No. HTB-46, ATCC)
2. Caki-2 (RRID:CVCL_0235; purchased March 2020, Cat. No. HTB-47, ATCC)

15 Mouse fibroblast
1. L cells (RRID:CVCL_4536; purchased February 2016, Cat. No. CRL-2648, ATCC)

16 Osteosarcoma
1. U2OS (RRID:CVCL_0042; purchased March 2020, Cat. No. HTB-96, ATCC)
Note - you cannot treat this cell line effectively with mycoplasma removal agent (Cat. No. BUF035, BioRad)