

Data Sheet

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BCRJ Code:	0387
Cell Line:	HCC1937
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Mammary Gland; Breast/Duct
Cell Type:	Lymphoblast, epithelial
Morphology:	Epithelial
Disease:	TNM stage IIB, grade 3, primary ductal carcinoma
Growth Properties:	Adherent, The line grows as large epithelial cells with a tendency to float at high cell densities
Sex:	Female
Age/Ethnicity:	23 Year /
Derivation:	This cell line was initiated from a primary ductal carcinoma on October 13, 1995, and took 11.5 months to establish.
Products:	Epithelial glycoprotein 2 (EGP2); cytokeratin 19. Genes Expressed: Epithelial glycoprotein 2 (EGP2); cytokeratin 19. Receptor Expression: estrogen receptor, negative, progesterone receptor, negative.
Biosafety:	1
Additional Info:	BRCA1 analysis revealed that the cell line is homozygous for the BRCA1 5382C mutation, whereas the lymphoblastoid cell line derived from the same patient is heterozygous for the same mutation.
Culture Medium:	RPMI-1640 medium modified to contain 2 mM L-glutamine, 4500 mg/L glucose, with fetal bovine serum to a final concentration of 10%



Volumes used in this protocol are for 75 cm² flask; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes. Remove and discard culture medium. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum that contains trypsin inhibitor. Add 1.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until the cell layer is dispersed (usually within 5 to 15 minutes). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Transfer cell suspension to centrifuge tube and spin at approximately 125 x g for 5 to 10 minutes. Discard supernatant and resuspend cells in fresh growth medium. Add appropriate aliquots of cell suspension to new culture vessels. Place culture vessels in incubators at 37°C. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010.

Subculturing:

Subculturing Medium Renewal:

Every 2 to 3 days

Subculturing Subcultivation Ratio:

1:2 to 1:4

Culture Conditions:

Atmosphere: air, 95%; carbon dioxide (CO₂), 5% Temperature: 37°C

Cryopreservation:

95% FBS + 5% DMSO (Dimethyl sulfoxide)

SAFETY PRECAUTION: It is strongly recommended to always wear protective gloves, clothing, and a full-face mask when handling frozen vials. Some vials may leak when submerged in liquid nitrogen, allowing nitrogen to slowly enter the vial. Upon thawing, the conversion of liquid nitrogen back to its gas phase may cause the vial to explode or eject its cap with significant force, creating flying debris.

1. Thaw the vial by gently agitating it in a 37°C water bath. To minimize contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).

2. Remove the vial from the water bath as soon as its contents are thawed and decontaminate it by dipping in or spraying with 70% ethanol. From this point, all operations must be performed under strict aseptic conditions.

3. For cells sensitive to DMSO, it is recommended to remove the cryoprotective agent immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL of complete culture medium and centrifuge at approximately 125 × g for 5 to 7 minutes.

4. Discard the supernatant and resuspend the cell pellet in the recommended complete medium (see specific batch information for the appropriate dilution ratio).

5. Incubate the culture under appropriate atmospheric and temperature conditions (see "Culture Conditions" for this cell line).

NOTE: It is important to avoid excessive alkalinity of the medium during cell recovery. To minimize this risk, it is recommended to place the culture vessel containing the growth medium in the incubator for at least 15 minutes before adding the vial contents. This allows the medium to stabilize at its normal pH (7.0 to 7.6).

Thawing Frozen Cells:

References:

Tomlinson GE, et al. Characterization of a breast cancer cell line derived from a germ-line BRCA1 mutation. *Cancer Res.* 58: 3237-3242, 1998. PubMed: 9699648
Gazdar AF, et al. Characterization of paired tumor and non-tumor cell lines established from patients with breast cancer. *Int. J. Cancer* 78: 766-774, 1998. PubMed: 9833771

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