

Data Sheet

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BCRJ Code:	0078
Cell Line:	DU 145
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Prostate; Derived From Metastatic Site: Brain
Morphology:	Epithelial
Disease:	Carcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethnicity:	69 Year /
Derivation:	established from the tumor tissue removed from the metastatic central nervous system lesion of a 69-year-old man with prostate carcinoma in 1975.
Applications:	This cell line is a suitable transfection host.
Tumor Formation::	Yes, in nude mice; forms adenocarcinoma (grade II) consistent with prostatic primary
Biosafety:	1
Additional Info:	The line is not detectably hormone sensitive, is only weakly positive for acid phosphatase and isolated cells form colonies in soft agar. The cells do not express prostate antigen. Ultrastructural analyses of both the cell line and original tumor revealed microvilli, tonofilaments, desmosomes, any mitochondria, well developed Golgi and heterogenous lysosomes.

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Culture Medium:

Dulbecco's Modified Eagle's Medium (DMEM) with 1.0 g/L glucose and 10% of fetal bovine serum.

Subculturing:

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 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until 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. Add appropriate aliquots of the cell suspension to new culture vessels. Incubate cultures 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 Medium Renewal:

2 to 3 times per week

Subculturing Subcultivation Ratio:

1:4 to 1:6

Culture Conditions:

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

Cryopreservation:

95% FBS + 5% DMSO (Dimethyl sulfoxide)

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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:

Papsidero LD , et al. Prostate antigen: a marker for human prostate epithelial cells. J. Natl. Cancer Inst. 66: 37-42, 1981. PubMed: 6935463
22858: Stone KR , et al. Isolation of a human prostate carcinoma cell line (DU 145). Int. J. Cancer 21: 274-281, 1

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Cellosaurus:

[CVCL_0105](#)