Data Sheet

BCRJ Code:	0346
Cell Line:	Renca
Species:	Mus musculus
Vulgar Name:	Mouse
Tissue:	Kidney
Cell Type:	Epithelial
Morphology:	Epithelial-Like
Disease:	Renal Adenocarcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	6 Week /
Derivation:	The Renca cell line was derived from a tumor that arose spontaneously as a renal cortical adenocarcinoma in Balb/cCr mice.
Tumor Formation::	YES
Biosafety:	1
Addtional Info:	The pattern of growth of this tumor accurately mimics that of human adult renal cell carcinoma, particularly with regard to spontaneous metastasis to lung and liver. The cells do not express transforming growth factor-beta type II receptor (TbetaR-II) 10414746.
Culture Medium:	RPMI-1640 medium modified to contain 2 mM L-glutamine, 4500 mg/L glucose, non-essential amino acids (NEAA) and 10% of fetal bovine serum.

Subculturing:	Volumes used in this protocol are for 75 cm2 flasks; 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 which 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. An inoculum of 2 X 10e4 to 4 X 10e4 viable cells/cm2 is recommended. Incubate cultures at 37°C. We recommend that you subculture when the culture reaches a cell concentration between 8 X 10e4 and 1.5 X 10e5 cells/cm2. Population Doubling Time approximately 24 hours. 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:	Every 2 to 3 days
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO2), 5% Temperature: 37°C
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)

Thawing Frozen Cells:	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).
References:	Murphy GP, Hrushesky WJ. A murine renal cell carcinoma. J. Natl. Cancer Inst. 50(4):1013-25, 1973. PubMed: 4703766 Salup RR, et al. Role of natural killer activity in development of spontaneous metastases in murine renal cancer. J. Urol. 134(6):1236-41, 1985. PubMed: 4057425 Engel J, et al. Transforming growth factor-beta type II receptor confers tumor suppressor activity in murine renal carcinoma (renca) cells . Urology. 54(1):164-70, 1999. PubMed: 10414746
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