Data Sheet

BCRJ Code:	0288
Cell Line:	HCT 116
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Colon
Cell Type:	Epithelial
Morphology:	Epithelial
Disease:	Colorectal Carcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	adult /
Applications:	This cell line is a suitable transfection host. This line has a mutation in codon 13 of the ras proto-oncogene, and can be used as a positive control for PCR assays of mutation in this codon.
DNA Profile:	Amelogenin: X,Y CSF1PO: 7,10 D13S317: 10,12 D16S539: 11,13 D5S818: 10,11 D7S820: 11,12 THO1: 8,9 TPOX: 8,9 vWA: 17,22
Tumor Formation::	YES, NUDE MICE
Products:	CARCINOEMBRYONIC ANTIGEN (CEA) 1ng PER 10E6 CELLS PER 10 DAYS; KERATIN
Biosafety:	1

Addtional Info:	The cells are positive for keratin by immunoperoxidase staining. HCT 116 cells are positive for transforming growth factor beta 1 (TGF beta 1) and beta 2 (TGF beta 2) expression.
Culture Medium:	McCoy's 5A Medium is modified to contain 2 mM L-glutamine and fetal bovine serum to a final concentration of 10%.
Subculturing:	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 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:	1:3 to 1:8 is recommended
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:	adenomas and carcinomas by enzyme-linked immunosorbent assay. Cancer 76: 201-209, 1995. Brattain MG, et al. Sun L,. Santoro IM, Groden J. Alternative splicing of the APC gene and its association with terminal differentiation. Cancer Res. et al. Autocrine transforming growth factor-beta 1 and beta 2 expression is increased by cell crowding and quiescence in colon carcinoma cells. Exp. Cell Res. 214: 215-224, 1994. Heterogeneity of malignant cells from a human colonic. carcinoma. Cancer Res. 41: 1751-1756, 1981.
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