BCRJ Code:	0110
Cell Line:	HT-1080
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Connective Tissue
Morphology:	Epithelial
Disease:	Fibrosarcoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	35 Year / Caucasian
Applications:	This cell line is a suitable transfection host.
DNA Profile:	Amelogenin: X,Y CSF1PO: 12 D13S317: 12,14 D16S539: 9,12 D5S818: 11,13 D7S820: 9,10 THO1: 6 TPOX: 8 vWA: 14,19
Virus Succeptility::	Human poliovirus 1 RD-114 Feline Feline leukemia virus Vesicular stomatitis virus
Tumor Formation::	Yes, in immunosuppressed mice
Biosafety:	1
Addtional Info:	The cells contain an activated N-ras oncogene.
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) with 2 mM L-glutamine, 1.0 g/L glucose and 10% of fetal bovine serum.

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. T-75 flasks are recommended for subculturing this product. 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:	Every 2 to 3 days
Subculturing Subcultivation Ratio:	1:4 to 1:8
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:	Chen TR, et al. Intercellular karyotypic similarity in near-diploid cell lines of human tumor origins. Cancer Genet. Cytogenet. 10: 351-362, 1983. PubMed: 6652615 Geiser AG, et al. Suppression of tumorigenicity in human cell hybrids derived from cell lines expressing different activated ras oncogenes. Cancer Res. 49: 1572-1577, 1989. PubMed: 2647289 Rasheed S, et al. Characterization of a newly derived human sarcoma cell line (HT-1080). Cancer 33: 1027-1033, 1974. PubMed: 4132053 Adams RA, et al. Direct implantation and serial transplantation of human acute lymphoblastic leukemia in hamsters, SB-2. Cancer Res. 28: 1121-1125, 1968. PubMed: 4872716 Proc. Am. Assoc. Cancer Res. 8: 1, 1967. Hu M, et al. Purification and characterization of human lung fibroblast motility-stimulating factor for human soft tissue sarcoma cells: identification as an NH2-terminal fragment of human fibronectin. Cancer Res. 57: 3577-3584, 1997. PubMed: 9270031 Iida A, et al. Inducible gene expression by retrovirus-mediated transfer of a modified tetracycline-regulated system. J. Virol. 70: 6054-6059, 1996. PubMed: 8709228 Brenneman M, et al. Stimulation of intrachromosomal homologous recombination in human cells by electroporation with site-specific endonucleases. Proc. Natl. Acad. Sci. USA 93: 3608-3612, 1996. PubMed: 8622983 Seiffert D. Hydrolysis of platelet vitronectin by calpain. J. Biol. Chem. 271: 11170-11176, 1996. PubMed: 8626663 Hocking AM, et al. Eukaryotic expression of recombinant biglycan. J. Biol. Chem. 271: 19571-19577, 1996. PubMed: 8702651
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