Data Sheet

BCRJ Code:	0303
Cell Line:	NTERA-2 cl.D1 [NT2/D1]
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Testis; Derived From Metastatic Site: Lung
Morphology:	Epithelial-Like,Differentiation Changes Phenotype
Disease:	Malignant Pluripotent Embryonal Carcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	22 Year / Caucasian
Derivation:	The parental NTERA-2 lines was established in 1980 from a nude mouse xenograft of the Tera-2 cell line. The NTERA-2 cl.D1 cell line is a pluripotent human testicular embryonal carcinoma cell line derived by cloning the NTERA-2 cell line.
Applications:	This cell line is a suitable transfection host.
DNA Profile:	Amelogenin: X,Y CSF1PO: 10,12 D13S317: 13 D16S539: 11,12,13 D5S818: 9,12 D7S820: 10,12 THO1: 9.3 TPOX: 8 vWA: 18,19
Virus Resistance::	UNTREATED CELLS: human cytomegalovirus (HCMV); human immunodeficiency virus (HIV-1, HTLV-III)
Biosafety:	1

Addtional Info:	This clone differentiates along neuroectodermal lineages after exposure to retinoic acid (RA) or hexamethylene bisacetamide (HMBA). The RA induced differentiation is characterized by glycolipid changes, appearance of neurons, and induction of homeobox (HOX) gene clusters. The cells exhibit high expression of N-myc oncogene activity. To induce differentiation, the cells should be trypsinized and seeded at a density 1 X 10 exp6 cells per 75 sq. cm. in medium containing 0.01 mM trans-retinoic acid. Stock solutions of trans-retinoic acid (10 mM, dissolved in DMSO) should be stored frozen (preferably under a nitrogen atmosphere).
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) modified to contain 2 mM L-glutamine, 4500 mg/L glucose and 10% of fetal bovine serum.
Subculturing:	Subcultures are prepared by scraping. Cells from confluent cultures (approximately 20 million cells per 75 cm2) are dislodged from the flask surface, aspirated and dispensed into new flasks. Cultures should be maintained at high density. Seed new flasks at a density of at least 5 X 10e6 viable cells per 75 cm2 flask.
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: Is highly recommend that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris. 1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the Oring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions. 3. For cells that are sensitive to DMSO is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes. 4.Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). 5. Incubate the culture in a appropriate atmosphere and temperature (see "Culture Conditions" for this cell line). NOTE: It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).

References:

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