Data Sheet

BCRJ Code:	0392
Cell Line:	MDA-MB-231/ Luc
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Breast
Morphology:	Epithelial-Like
Growth Properties:	Adherent, spindle shaped cells.
Derivation:	The MDA-MB-231 breast cancer cell line was obtained from a patient in 1973 at M. D. Anderson Cancer Center.
Tumor Formation::	Yes, in nude mice
Products:	Firefly luciferase gene and Neomycin resistant gene.
Biosafety:	1
Addtional Info:	The MDA-MB-231 breast cancer cell line was obtained from a patient in 1973 at M. D. Anderson Cancer Center. With epithelial-like morphology, the MDA-MB-231 breast cancer cells appear phenotypically as spindle shaped cells. In vitro, the MDA-MB-231 cell line has an invasive phenotype. It has abundant activity in both the Boyden chamber chemoinvasion and chemotaxis assay. The MDA-MB-231 cell line is also able to grow on agarose, an indicator of transformation and tumorigenicity, and displays a relatively high colony forming efficiency. In vivo, the MDA-MB-231 cells form mammary fat pad tumors in nude mice. IV injection of cells into the tail vein of nude mice has been shown to produce experimental metastasis. Our MDA-MB-231/Luc cell line stably expresses firefly luciferase gene and Neomycin resistant gene.
Culture Medium:	DMEM (high glucose) with 10% of fetal bovine serum (FBS), 0.1 mM MEM Non-Essential Amino Acids (NEAA).

Subculturing:	Monitor cell density daily. Cells should be passaged when the culture reaches 95% confluence. Remove medium, rinse with fresh 0.25% trypsin, 0.53 mM EDTA solution, remove trypsin and let the culture sit at 37°C for 10 to 15 minutes. Add fresh medium, aspirate and dispense into new flasks. 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.
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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Depositors:

Marcelo Bispo - UNICAMP