

Data Sheet

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BCRJ Code:	0164
Cell Line:	MDA-MB-231
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Mammary Gland/Breast; Derived From Metastatic Site: Pleural Effusion
Cell Type:	Epithelial
Morphology:	Epithelial
Disease:	Adenocarcinoma
Growth Properties:	Adherent
Sex:	Female
Age/Ethinicity:	51 Year / Caucasian
Applications:	These cells are a suitable transfection host
DNA Profile:	Amelogenin: X CSF1PO: 12,13 D13S317: 13 D16S539: 12 D5S818: 12 D7S820: 8,9 THO1: 7,9.3 TPOX: 8,9 vWA: 15,18
Tumor Formation::	Yes, in ALS treated BALB/c mice, forms poorly differentiated adenocarcinoma (grade III) Yes, in nude mice, forms poorly differentiated adenocarcinoma (grade III)
Dissofator	

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Culture Medium:	Leibovitz's L-15 Medium contains 2 mM L-glutamine, NO sodium bicarbonate and fetal bovine serum to a final concentration of 10%. Note: The L-15 medium formulation was devised for use in a free gas exchange with atmospheric air. A CO2 and air mixture is detrimental to cells when using this medium for cultivation.
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. 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:	1:2 to 1:4
Culture Conditions:	Atmosphere: air, 100% Temperature: 37°C
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)

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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 yial contents. This allows the medium to stabilize at its normal pH (7.0
	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).

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References:	Binnkey BN, et al. Variations in cerkes. 40: 3118-3129, 1980. PubMed: 7000337 Cruciger Q, et al. Morphological, biochemical and chromosomal characterization of breast tumor lines from pleural effusions. In Vitro 12: 331, 1976. Siciliano MJ, et al. Mutually exclusive genetic signatures of human breast tumor cell lines with a common chromosomal marker. Cancer Res. 39: 919-922, 1979. PubMed: 427779 Cailleau R, et al. Breast tumor cell lines from pleural effusions. J. Natl. Cancer Inst. 53: 661-674, 1974. PubMed: 4412247 Cailleau R, et al. Long-term human breast carcinoma cell lines of metastatic origin: preliminary characterization. In Vitro 14: 911-915, 1978. PubMed: 730202 Bates SE, et al. Expression of the transforming growth factor-alpha/epidermal growth factor receptor pathway in normal human breast epithelial cells. Endocrinology 126: 596-607, 1990. PubMed: 2294006 Dickstein B, et al. Increased epidermal growth factor receptor in an estrogen-responsive, adriamycin-resistant MCF-7 cell line. J. Cell. Physiol. 157: 110-118, 1993. PubMed: 8408230 Huguet EL, et al. Differential expression of human Wnt genes 2, 3, 4, and 7B in human breast cell lines and normal and disease states of human breast tissue. Cancer Res. 54: 2615-2621, 1994. PubMed: 8168088 Satya-Prakash KL, et al. Cytogenetic analysis on eight human breast tumor cell lines: high frequencies of 1q, 11q and HeLa-like marker chromosomes. Cancer Genet. Cytogenet. 3: 61-73, 1981. PubMed: 7272986 Katayose Y, et al. Promoting apoptosis: a novel activity associated with the Cyclin- dependent kinase inhibitor p27. Cancer Res. 57: 5341-5445, 1997. PubMed: 9407946 Littlewood-Evans AJ, et al. The osteoclast-associated protease cathepsin K is expressed in human breast carcinoma. Cancer Res. 57: 5386-5309, 1997. PubMed: 9393764 Sheng S, et al. Maspin acts at the cell membrane to inhibit invasion and motility of mammary and prostatic cancer cells. Proc. Natl. Acad. Sci. USA 93: 11669-11674, 1996. PubMed: 8876194 De Vincenzo R, et al. Antiproliferative activity of co
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Cellosaurus:	<u>CVCL_0062</u>

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