

Data Sheet

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BCRJ Code:	0377
Cell Line:	IMR-32
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Brain; derived from metastatic site: abdominal mass
Cell Type:	Neuroblast
Morphology:	Fibroblast; neuroblast
Disease:	Neuroblastoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethnicity:	13 Month /
Derivation:	The IMR-32 cell line was established by W.W. Nichols, J. Lee and S. Dwight in April, 1967 from an abdominal mass occurring in a 13-month-old Caucasian male. The tumor was diagnosed as a neuroblastoma with rare areas of organoid differentiation.
Applications:	This cell line is a suitable transfection host.
Virus Susceptibility::	Vesicular stomatitis, Orsay (Indiana) Vesicular stomatitis, Glasgow (Indiana) Herpes simplex virus Vaccinia virus Human Coxsackievirus B3 Human poliovirus 3
Biosafety:	1
Additional Info:	Two cell types are present. Predominant is a small neuroblast-like cell. The other is a large hyaline fibroblast. IMR-32 cells may pile up and grow in patches. IMR-32 cells may not become 100% confluent.

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Culture Medium:

Dulbecco's Modified Eagle's Medium (DMEM) with 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 1.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until the 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. Transfer cell suspension to centrifuge tube and spin at approximately 125 x g for 5 to 10 minutes. Discard supernatant and resuspend cells in fresh growth medium. Add appropriate aliquots of cell suspension to new culture vessels. Maintain cultures at a cell concentration between 4x10⁴ and 4 x 10⁵ cells/cm². Place culture vessels in incubators 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. Population Doubling Time: approximately 20 hrs.

Subculturing Medium Renewal:

Every 2 to 3 days

Subculturing Subcultivation Ratio:

1:3 to 1:6 is recommended

Culture Conditions:

Atmosphere: air, 95%; carbon dioxide (CO₂), 5%

Cryopreservation:

95% FBS + 5% DMSO (Dimethyl sulfoxide)

Thawing Frozen Cells:

SAFETY PRECAUTION: It is highly recommended 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 submerged 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 it 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 an 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:

Tumilowicz JJ, et al. Definition of a continuous human cell line derived from neuroblastoma. *Cancer Res.* 30: 2110-2118, 1970. PubMed: 5459762
Rostomily RC, et al. Expression of neurogenic basic helix-loop-helix genes in primitive neuroectodermal tumors. *Cancer Res.* 57: 3526-3531, 1997. PubMed: 9270024
Maestrini E, et al. A family of transmembrane proteins with homology to the MET-hepatocyte growth factor receptor. *Proc. Natl. Acad. Sci. USA* 93: 674-678, 1996. PubMed: 8570614

Depositors:

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ATCC:

CCL-127