Data Sheet

BCRJ Code:	0202
Cell Line:	PC-12 ADH
Species:	*Rattus norvegicus*
Vulgar Name:	Rat
Tissue:	Adrenal Gland
Morphology:	Polygonal
Disease:	Pheochromomyocitoma
Growth Properties:	Adherent, Small Clusters
Sex:	Male
Derivation:	The PC-12 cell line was derived from a transplantable rat pheochromocytoma. The cells do not synthesize epinephrine. This adherent variant (PC-12 Adh) has been adapted to Corning CellBIND® flasks to improve cell attachment
Applications:	This cell line is a suitable transfection host.
Tumor Formation::	Yes, in New England Deaconess Hospital strain rats
Products:	catecholamines; dopamine; norepinephrine
Biosafety:	1
Culture Medium:	F-12K Medium (Kaighn's Modification of Ham's F-12 Medium) contains 2 mM L-glutamine, fetal bovine serum to a final concentration of 2.5% and horse serum to a final concentration of 15%.

Subculturing:	Use Corning CellBIND flasks (Corning catalog #3289 through 3293) Volumes used for this protocol are for a 75 cm2 flask; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes. Remove and discard old culture medium. Pipet 10 mL fresh medium over the cell sheet and scrape. Aspirate cells with a small bore pipette to break up clusters. Add appropriate aliquots of the cell suspension to new Corning CellBIND® 75 cm2 flask with 15 mL fresh growth medium. Seed flask at 1.0 x 10e4 to 3.0 x 10e4 viable cells / cm2 or use subcultivation ratio of 1:3 twice weekly. Subculture when cell density reaches between 1.0 x 10e5 to 2.0 x 10e5 viable cells/cm2. Place culture vessels in incubator at 37°C. Population Doubling Time 48 hrs 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
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:	Levi A, et al. Molecular cloning of a gene sequence regulated by nerve growth factor. Science 229: 393-395, 1985
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Cellosaurus:	CVCL_F659