BCRJ Code:	0416
Cell Line:	NCI-H460 [H460]
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Lung; Pleural effusion
Cell Type:	Epithelial
Morphology:	Epithelial
Disease:	Carcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	Year /
Derivation:	The NCI-H460 cell line was derived by A.F. Gazdar and associates in 1982 from the pleural fluid of a patient with large cell cancer of the lung.
Applications:	NCI-H460 [H460] cells were isolated in 1982 from the pleural fluid of a male patient with large cell lung cancer. Use these cells in your cancer and toxicology research.
DNA Profile:	"D3S1358: 15,18 TH01: 9.3 D21S11: 30 D18S51: 13,15 Penta_E: 5 D5S818: 9,10 D13S317: 13 D7S820: 9,12 D16S539: 9 CSF1PO: 11,12 Penta_D: 11,13 Amelogenin: X,Y vWA: 17 D8S1179: 12 TPOX: 8 FGA: 21,23 D19S433: 14 D2S1338: 17,25"
Tumor Formation::	Yes; Yes, in nude mice
Products:	"Isoenzymes: AK-1, 1 ES-D, 1 G6PD, B GLO-I, 1-2 Me-2, 1 PGM1, 1 PGM3, 1"

Biosafety:	1
Addtional Info:	The cells express easily detectable p53 mRNA at levels comparable to normal lung tissue, and exhibit no gross structural DNA abnormalities. The cells stain positively for keratin and vimentin but are negative for neurofilament triplet protein.
Culture Medium:	RPMI 1640 with 2.0 mM L-glutamine adjusted to contain 4.5 g/L glucose, 1.0 mM sodium pyruvate and 10% of fetal bovine serum.
Subculturing:	"Remove medium, and rinse with 0.25% trypsin, 0.03% EDTA solution. Remove the solution and add an additional 1 to 2 mL of trypsin-EDTA solution. Allow the flask to sit at room temperature (or at 37°C) until the cells detach. Add fresh culture medium, aspirate and dispense into new culture flasks."
Subculturing Medium Renewal:	Twice a week
Subculturing Subcultivation Ratio:	1:3 to 1:8 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 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:	"Banks-Schlegel SP, et al. Intermediate filament and cross-linked envelope expression in human lung tumor cell lines. Cancer Res. 45: 1187-1197, 1985. PubMed: 2578876 Takahashi T, et al. p53: A frequent target for genetic abnormalities in lung cancer. Science 246: 491-494, 1989. PubMed: 2554494 Brower M, et al. Growth of cell lines and clinical specimens of human non-small cell lung cancer in a serum-free defined medium. Cancer Res. 46: 798-806, 1986. PubMed: 3940644 Geiger T, et al. Antitumor activity of a PKC-alpha antisense oligonucleotide in combination with standard chemotherapeutic agents against various human tumors transplanted into nude mice. Anticancer Drug Des. 13: 35-45, 1998. PubMed: 9474241"
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