

COR-L23 Cells | 305895

General information

Description

COR-L23 is a human lung carcinoma cell line derived from an adult patient with large cell lung carcinoma (LCLC). The cell line was established from a clinical tumor sample and represents a non-small cell lung cancer model with epithelial characteristics. In culture, COR-L23 grows as an adherent monolayer and is maintained in standard RPMI-based medium supplemented with fetal serum. The cell line was developed as part of a panel of lung cancer models derived directly from patient specimens to facilitate investigation of the molecular and cellular mechanisms underlying lung tumorigenesis.

Phenotypic characterization has shown that COR-L23 differs from classical small cell lung carcinoma cell lines in both morphology and biomarker expression. Unlike typical small cell lung cancer models that grow as floating aggregates and express strong neuroendocrine markers, COR-L23 displays features consistent with large cell carcinoma, including reduced expression of neuroendocrine-associated enzymes and markers commonly observed in small cell lung cancer. These differences highlight its relevance as a model for studying non-small cell lung cancer biology and for comparing molecular features between distinct lung cancer subtypes.

Genetic and cytogenetic analyses of lung cancer cell line panels that include COR-derived models have revealed chromosomal abnormalities and oncogenic alterations commonly associated with lung malignancies. Such alterations may involve dysregulation of oncogene families and structural chromosomal changes that contribute to tumor progression. Due to these molecular features and its well-characterized phenotype, COR-L23 is widely used for studies of lung cancer signaling pathways, drug response, and mechanisms of tumor cell proliferation and survival.

Organism Human

Tissue Metastatic

Disease Lung large cell carcinoma

Metastatic site Pleural effusion

Synonyms CORL23, COR-L23P, COR-L23/P, L23/P

Characteristics

Age 62 years

Gender Male

Ethnicity Caucasian

Morphology epithelioid, very large, often multinucleate cells growing adherently as monolayer; image ; image ; image ; image

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Growth properties	Adherent
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Regulatory Data

Citation	COR-L23 (Cytion catalog number 305895)
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Biosafety level	1
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NCBI_TaxID	9606
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CellosaurusAccession	CVCL_1139
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Biomolecular Data

Mutational profile	Mutation: p.Gly12Val, Homozygous
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Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO ₃ (Cytion article number 820700a)
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Supplements	Supplement the medium with 10% FBS
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Dissociation Reagent	Accutase
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Doubling time	35 hours ; ~30 hours
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Seeding density	1 to 3 x 10 ⁴ cells/cm ²
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Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.
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Thawing and Culturing Cells

1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
6. Centrifuge the mixture at $200 \times g$ for 5 minutes, carefully discard the supernatant containing freezing medium.
7. Follow the procedure described under Post-Thaw Recovery

Incubation Atmosphere

37°C , 5% CO_2 , humidified atmosphere.

Shipping Conditions

Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately -78°C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.

Storage Conditions

For long-term preservation, place vials in vapor-phase liquid nitrogen at about -150 to -196°C . Storage at -80°C is acceptable only as a short interim step before transfer to liquid nitrogen.

Quality Control & Molecular Analysis