

TOV-112D cells | 305584

General information

Description

TOV-112D is a human endometrioid ovarian carcinoma cell line established from the primary ovarian tumor of a 42-year-old Caucasian female patient. The line grows as an adherent monolayer. TOV-112D harbors a TP53 p.Ser37Ala (homozygous) substitution in the transactivation domain, a homozygous PTEN frameshift mutation (p.Leu639fs), and a TP53 p.Arg175His mutation. This combination of TP53 and PTEN alterations makes TOV-112D a relevant model for studying endometrioid-type ovarian carcinoma, which frequently harbors concurrent TP53, PTEN, and CTNNB1 mutations. The doubling time is approximately 22–29 hours.

TOV-112D is applicable in studies of endometrioid ovarian carcinoma biology, TP53 mutant phenotype, PTEN loss and PI3K/Akt pathway activation, drug sensitivity evaluation (carboplatin, paclitaxel, PARP inhibitors), and gynecological oncology research. It is suitable for in vitro pharmacological assays and xenograft models in immunocompromised hosts for preclinical ovarian cancer drug evaluation.

Organism Homo sapiens (Human)

Tissue Ovary

Disease Endometrioid carcinoma of ovary

Metastatic site Primary tumor site (ovary)

Applications Endometrioid ovarian carcinoma; TP53 mutant tumor biology; PTEN loss and PI3K/Akt activation; drug sensitivity (carboplatin, paclitaxel, PARP inhibitors); gynecological oncology; xenograft models

Synonyms TOV-112d, TOV112D, TOV-112, TOV112

Characteristics

Age 42Y

Gender Female

Ethnicity Caucasian

Morphology Epithelial-like

Cell type Epithelial cells

Growth properties Adherent

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Regulatory Data

Citation	TOV-112D (Cytion catalog number 305584)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_3612
GMO Status	No genetic modification; wildtype ovarian carcinoma cell line with somatic TP53 and PTEN mutations

Biomolecular Data

Mutational profile	Mutation: p.Ser37Ala, Homozygous; Mutation: p.Leu639fs, Homozygous; Mutation: p.Arg175His, Unspecified
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Handling

Culture Medium	The base medium for this cell line is a 1:1 mixture of MCDB 105 medium containing a final concentration of 1.5 g/L sodium bicarbonate and Medium 199 containing a final concentration of 2.2 g/L sodium bicarbonate
Supplements	Supplement the medium with 15% FBS
Dissociation Reagent	Accutase
Doubling time	0.8 day ; 1.0 +- 0.2 days ; 22 hours ; 1.49 days ; 29.13 hours
Subculturing	Remove medium, wash with PBS without calcium and magnesium, cover with Accutase, incubate 8–10 min at RT, resuspend in medium, centrifuge 300×g 3 min, discard supernatant, reseed in fresh medium.
Split ratio	1 to 5
Seeding density	2-4*10 ⁴ /cm ²
Fluid renewal	Every 2 to 3 days
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