Product description

The PEO1 Cell Line is one of nine in the PE ovarian cancer panel (derived from 4 patients at varying stages of disease, isolated from different malignant sites and treatment timepoints), providing a model system for the study of ovarian cancer biology and therapeutic response. PEO1 is an adherent cell line derived from a malignant effusion from the peritoneal ascites of a patient with high-grade serous ovarian carcinoma (historically described as serous adenocarcinoma). The patient previously received cisplatin, 5-fluorouracil and chlorambucil treatment. PEO1 is tumourigenic in immunologically-deprived CBA mice and represents a platinum-sensitive baseline model within the PEO cell line series used to study treatment-driven tumour evolution. This is a slow-growing cell line, please refer to the sub-culturing notes below.

Name: PE01 Cell Line

Organism: Human

Disease: Cancer

Cancer Type: Ovarian cancer

Cancers detailed: High-Grade Serous Ovarian (HGSOC)

Gender: Female

Tissue: Ovary

Growth properties: Adherent

Additional notes: Please be aware that the originating laboratory of the PEO1 cell line acknowledges that PEO1 is both **genetically unstable** and derived from a **heterogeneous population** that was already present in the patient at the time of biopsy. This is evident in the literature (Cooke et al., 2010). Genetic differences within the PEO1, PEO4 and PEO6 cell lines suggest that PEO4 and PEO6 are not direct descendants of PEO1 but have diverged from a common ancestor.

Model: Tumourigenic line

Model description: The cell line is tumourigenic in immunologically-deprived CBA mice

CRISPR edited: No

Conditional: No

Biosafety level: 1

Mycoplasma free: Yes

Cellosaurus id: CVCL_2686

Contributor(s)

Inventor: Simon Langdon
Institute: Cancer Research UK Edinburgh Centre

Properties

Product format: Frozen

Unpacking and storage:

1. Check all containers for leakage or breakage.

2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.

Recommended growth medium: RPMI-1640 + 2mM Glutamine + 2mM Sodium Pyruvate + 10% Foetal Bovine Serum (FBS)

Subculture: Split sub-confluent cultures (70-80%) 1:4 to 1:10 seeding at 2- 3 x 10^4 cells/cm^2 using 0.05% trypsin or trypsin/EDTA; 5% CO_2; 37°C. Doubling time is approximately 37 hours.

Culture conditions: 37.0°C ± 1.0°C incubator with 5.0% ± 1.0% CO_2

Handling instructions

1. Please ensure that vials are frozen when received, and store at **<-130 °C long term**. When removing frozen cells from storage, it is important to minimise exposure to room temperature (15 - 25°C). If not proceeding directly to thawing, place the cells on dry ice or in a liquid nitrogen container.
2. **Do not thaw at room temperature.** To thaw, swirl the vial quickly in a 37 °C water bath with O-ring and cap above the water to avoid contamination. Remove from the water bath with a small ice pellet remaining (this should not take more than 2 minutes) and wipe the exterior with 70% ethanol or isopropanol before transferring to a biosafety cabinet. **Do not vortex.** Further steps should be conducted under aseptic conditions.
3. We strongly recommend that the volume of cell suspension is measured at this point, and a 20 uL aliquot be removed for a **viable cell count** using trypan blue or similar dye. This ensures that provided cells are viable, and the cell count can be used to determine volume of growth medium to be added to the cell suspension.
4. Transfer the remaining cell suspension to a sterile 15 mL conical tube using a pipette. Be careful not to introduce bubbles.
5. Rinse the vial with 1 mL of medium and add it dropwise to the cells.
6. Wash by adding 9 mL of medium **dropwise**, while gently swirling the tube.
7. Centrifuge the cell suspension at **300 x g for 2-3 minutes** at room temperature.
8. Carefully remove the supernatant with a pipette, leaving a small amount of medium to ensure the cell pellet is not disturbed. Resuspend the cell pellet by gently flicking the tube.
9. Gently add 10-15 mL culture medium and transfer to T75 tissue culture flask and incubate.
10. Exchange with 10-15 mL of fresh medium after 24 hours. Subculture following instructions above.

References

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Material Citation

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