

Product description

MCF7/TAMR-7 cell line is a stable tamoxifen-resistant subline. The cell line has been established in tissue culture after long term treatment with 1 uM tamoxifen. Tamoxifen (Nolvadex) is a widely used drug for hormone-dependent cancer. Tamoxifen resistance (either primary or acquired) makes oestrogen receptor-positive breast cancer much more difficult to treat. This cell line was produced as an adaptation of an original cell line (MCF7/S0.5), as a model cell system to study the effects of tamoxifen resistant cancer growth. MCF7/TAMR-7 cells are oestrogen receptor positive and progesterone receptor negative. Previous applications of this cell line include treatment with steroidal antioestrogens. MCF7/TAMR-7 enables identification of new hormone therapies and greater understanding of the signalling pathways/methods behind tamoxifen resistance.

Name: MCF7/TAMR-7 Cell line

Organism: Human

Disease: Cancer

Cancer detailed: Breast cancer

Tissue: Breast

Parent cell line: MCF7 S0.5

Growth properties: Adherent

Model: Cancer cell line

Donor: Female, Caucasian, 69Y

Production details: The parental cell line for the MCF7/TAMR-7 cells is MCF7/S0.5, which was adapted to grow at low serum concentration in order to study the effect of oestradiol and tamoxifen. MCF7/TAMR-7 has been established from a clone of cells that survived long term treatment with 1 uM tamoxifen. Tamoxifen-resistant cells are passaged continuously in presence of 1 uM tamoxifen, which is lethal for the parental MCF7/S0.5 cell line.

Cellosaurus ID: CVCL_1D43

Biosafety level: 1

Contributor(s)

Inventor: Anne Lykkesfeldt

Institute: Danish Cancer Society

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 medium: Phenol red-free DMEM:Ham's F-12 containing 1% foetal calf serum, 2 mM Glutamax and 6 ng/ml insulin. To maintain high-level resistance, medium was supplemented with Tamoxifen (1 µM).

Culture conditions: 37.0°C ± 1.0°C humidified incubator with 5.0% CO₂.

Cryopreservation medium: 10% DMSO in FCS.

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 minimize 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. Further steps should be conducted under aseptic conditions.
3. We strongly recommend that the volume of cell suspension is measured, and a 20 uL aliquot be set aside at this point for a viable cell count using trypan blue or similar dye.
9. Dilute the cell suspension with 5 mL medium each into T25 flasks to achieve a seeding density of 0.5-1.0 x 10⁴ / cm². Place in 37°C, 5% CO₂ incubator.
10. Change medium after 24 hours to remove residual DMSO and then every 2-3 days.
11. Subculture routine: Split 1:30 weekly with Trypsin-EDTA for detachment at 37 °C for 5 minutes.

References

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Material Citation

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