## Product description

The MCF7/182R-6 cell line is a breast cancer cell line resistant to fulvestrant (Faslodex). The MCF7/182R-6 cell line is a human breast cancer cell line established from a clone of MCF7/S0.5 cells surviving long term growth with the pure steroidal antioestrogen ICI 182,780 (fulvestrant) in 100 nM concentration. The cellular classification is epithelial, and their shape is polygonal. MCF7/182R-6 cells express oestrogen receptor alpha and do not express progesterone receptor. Treatment with the steroidal antioestrogen fulvestrant has proven effective upon progression on tamoxifen therapy and is now approved for second-line treatment after tamoxifen or aromatase inhibitors. As for tamoxifen treatment of advanced breast cancer, resistance will inevitably occur also for fulvestrant. Clarification of the molecular changes associated with the resistant growth is needed to find targeted treatments to resistant tumour cells and treatments that can inhibit or delay the emergence of resistance.

**Name:** MCF7/182R-6 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 MCF7/182R-6 cell line has been established from a clone of MCF7/S0.5 cells surviving long term growth with the pure steroidal antioestrogen ICI 182,780 in 100 nM concentration, see Lykkesfeldt et al (1995). The MCF7/182R-6 cells are grown in the presence of fulvestrant.

**Cellosaurus ID:** CVCL_W536

**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/F12 (1:1) supplemented with 1% FCS, Glutamax 2.5 mM and 6 ng/ml insulin. Supplemented with 100nM fulvestrant to maintain resistance.

**Culture conditions:** 37.0°C ± 1.0°C humidified incubator with 5.0% $CO_2$.

**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 sufficient medium and distribute 5 mL each into T25 flasks to achieve a seeding density of 0.5-1.0 x $10^4$ / $cm^2$. Place in 37°C, 5% $CO_2$ 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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- Nabha et al. 2005. Oncogene. 24(19):3166-3176. PMID: 15735693.
- Lykkesfeldt et al. 1995. Int J Cancer. 61(4):529-534. PMID: 7759159.


## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: MCF7/182R-6 Cell Line was invented by Anne Lykkesfeldt (CancerTools.org #152105).