

# MCF7/182R-6 Cell Line

**Catalogue number:** 152105

**Sub-type:** Continuous

**Images:**

## Contributor

**Inventor:** Anne Lykkesfeldt

**Institute:** Danish Cancer Society, Denmark

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** MCF7/182R-6 Cell Line

**Alternate name:** MCF-7/182R-6

**Class:**

**Conjugate:**

**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 antiestrogen 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.

**Purpose:**

**Parental cell:** MCF7 S0.5

**Organism:** Human

**Tissue:** Breast

**Model:** Tumour line

**Gender:** Female

**Isotype:**

**Reactivity:**

**Selectivity:**

**Host:**

**Immunogen:**

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**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 antiestrogen ICI 182,780 in 100 nM concentration, see Lykkesfeldt et al (1995). The MCF7/182R-6 cells are grown in the presence of fulvestrant.

**Formulation:**

**Recommended controls:**

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:**

## Target details

**Target:** Oestrogen receptor

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:** Investigation of molecular changes

**Application notes:** Upon withdrawal of fulvestrant, the resistant phenotype is stable and the cells express ER alpha, although at a reduced level. The MCF7/182R-6 cells do not express progesterone receptor. The MCF7/182R-6 cells express increased level of EGFR, phosphorylated EGFR and phosphorylated ErbB3 and reduced level of ErbB4 compared to the parental MCF7/S0.5 cells. Passage 421 (AL2533, AL2536) In mice, estrogen supplementation is required for formation of tumours, and treatment with ICI 182,780 inhibit...

## Handling

**Format:** Frozen

**Concentration:**

**Passage number:**

**Growth 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.

**Temperature:** 37° C

**Atmosphere:** 5% CO2

**Volume:**

**Storage medium:**

**Storage buffer:**

**Storage conditions:** Liquid Nitrogen

**Shipping conditions:** Dry ice

## Related tools

**Related tools:**

## References

**References:** Thrane et al. 2014. *Oncogene*. 34(32):4199-4210. PMID: 25362855. ; Frogne et al. 2008. *Breast Cancer Res Treat*. 114(2):263-275. PMID: 18409071. ; Frankel et al. 2006. *Breast Cancer Res Treat*. 104(2):165-179. PMID: 17061041. ; Frogne et al. 2005. *Endocr Relat Cancer*. 12(3):599-614. PMID: 16172194. ; Bradshaw et al. 2004. *Curr Med Chem*. 11(8):1009-1021. PMID: 15078163. ; Lykkesfeldt et al. 1995. *Int J Cancer*. 61(4):529-534. PMID: 7759159.

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