# MCF7/S0.5 Cell Line

**Catalogue number:** 152090
**Sub-type:** Continuous
**Images:**

## Contributor

**Inventor:** Anne Lykkesfeldt
**Institute:** Danish Cancer Society
**Images:**

## Tool details

***FOR RESEARCH USE ONLY**

**Name:** MCF7/S0.5 Cell Line

**Alternate name:** MCF7/S0.5; MCF-7/S0.5; MCF7 S0.5



**Class:**
**Conjugate:**
**Description:** The MCF7/S0.5 human breast cancer cell line has been established to grow at low serum. The presence of hormones in the serum required in tissue culture media complicates the demonstration of specific hormone and antihormone effects. Methods to overcome this have included charcoal-treated serum and serum-free medium. However, both methods have serious drawbacks. Therefore, the MCF-7/S0.5 cell line has been adapted to long-term growth at 0.5 % fetal bovine serum in order to reduce the oestroge...
**Purpose:**
**Parental cell:** MCF7
**Organism:** Human
**Tissue:** Breast
**Model:** Tumour line
**Gender:** Female
**Isotype:**
**Reactivity:**
**Selectivity:**
**Host:**
**Immunogen:**
**Immunogen UNIPROT ID:**
**Sequence:**
**Growth properties:** Adherent
**Production details:** This MCF7 subline was established buy stepwise reduction in the serum

concentration from 5% fetal calf serum to 0.5 % in growth medium consisting of DMEM: Ham's F-12 medium (1:1) supplemented with 2mM glutamine and insulin (6ng/ml)
**Formulation:**
**Recommended controls:**
**Bacterial resistance:**
**Selectable markers:**
**Additional notes:**

## Target details

**Target:** Oestrogen receptor

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:** Hormone and anti-hormone effects studies; Studies of the effect of oestrogens; Estradiol and tamoxifen effects studies
**Application notes:**



## Handling

**Format:** Frozen
**Concentration:**
**Passage number:** Passage 408 (AL2542, AL2543)
**Growth medium:** Phenol-red-free DMEM/F12 medium supplemented with 1% Fetal calf serum 2.5 mM Glutamax and 6 ng/ ml Insulin
**Temperature:** 37° C
**Atmosphere:** 5% CO2
**Volume:**
**Storage medium:**
**Storage buffer:**
**Storage conditions:** Liquid Nitrogen
**Shipping conditions:** Dry ice

## Related tools

**Related tools:** MCF7/TAMR-1 Human Breast Cancer Cell Line ; MCF7/TAMR-4 Cell Line ; MCF7/TAMR-7 Cell line ; MCF7/TAMR-8 Cell Line ; MCF7/S9 Cell Line

## References

**References:** Lee et al. 2018. Autophagy. 14(5):812-824. PMID: 29130361. ; Martin et al. 2017. Nat Commun. 8(1):1865. PMID: 29192207. ; An in vitro model for the development of acquired tamoxifen resistance. ; Guney Eskiler et al. 2016. Cell Biol Toxicol. :. PMID: 27585693. ; Joshi et al. 2016. Oncotarget. :. PMID: 27528030. ; Integrative analysis of miRNA and gene expression reveals regulatory networks in tamoxifen-resistant breast cancer. ; ERa dimerization: a key factor for the weak estrogenic activity of an ERa modulator unable to compete with estradiol in binding assays. ; Leclercq et al. 2016. J Recept Signal Transduct Res. :1-18. PMID: 27400858. ; Guest et al. 2016. PLoS One. 11(6):e0157397. PMID: 27308830. ; Src Is a Potential Therapeutic Target in Endocrine-Resistant Breast Cancer Exhibiting Low Estrogen Receptor-Mediated Transactivation. ; High CDK6 Protects Cells from Fulvestrant-Mediated Apoptosis and is a Predictor of Resistance to Fulvestrant in Estrogen Receptor-Positive Metastatic Breast Cancer. ; Alves et al. 2016. Clin Cancer Res. :. PMID: 27252418. ; Hole et al. 2015. Int J Oncol. 46(4):1481-90. PMID: 25625755. ; Elias et al. 2015. Oncogene. 34(15):1919-27. PMID: 24882577. ; Thrane et al. 2014. Oncogene. PMID: 25362855. ; A kinase inhibitor screen identifies Mcl-1 and Aurora kinase A as novel treatment targets in antiestrogen-resistant breast cancer cells. ; Differential response to a-oxoaldehydes in tamoxifen resistant MCF-7 breast cancer cells. ; Gene expression profiling identifies FYN as an important molecule in tamoxifen resistance and a predictor of early recurrence in patients treated with endocrine therapy. ; Nass et al. 2014. PLoS One. 9(7):e101473. PMID: 24983248. ; Thrane et al. 2013. Breast Cancer Res Treat. 139(1):71-80. PMID: 23609470. ; Estrogen receptor a is the major driving factor for growth in tamoxifen-resistant breast cancer and supported by HER/ERK signaling. ; Cutrupi et al. 2012. Oncogene. 31(40):4353-61. PMID: 22249258. ; Targeting of the adaptor protein Tab2 as a novel approach to revert tamoxifen resistance in breast cancer cells. ; Plaza-Menacho et al. 2010. Oncogene. 29(33):4648-57. PMID: 20531297. ; Targeting the receptor tyrosine kinase RET sensitizes breast cancer cells to tamoxifen treatment and reveals a role for RET in endocrine resistance. ; Lykkesfeldt et al. 1994. Cancer Res. 54(6):1587-95. PMID: 8137264. ; Altered expression of estrogen-regulated genes in a tamoxifen-resistant and ICI 164,384 and ICI 182,780 sensitive human breast cancer cell line, MCF-7/TAMR-1. ; Lykkesfeldt et al. 1986. Br J Cancer. 53(1):29-35. PMID: 3947513. ; Indirect mechanism of oestradiol stimulation of cell proliferation of human breast cancer cell lines.