

T47D/TR-2 Cell Line

Catalogue number: 152110

Sub-type: Continuous

Images:

Contributor

Inventor: Anne Lykkesfeldt

Institute: Danish Cancer Society, Denmark

Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: T47D/TR-2 Cell Line

Alternate name:

Class:

Conjugate:

Description: The T47D-182R-1 cell line is an adherent breast cancer cell line resistant to fulvestrant (Faslodex). It is derived from the human breast cancer cell line - T47D/S5 by long term treatment with 100 nM fulvestrant. T47D-182R-1 is adherent and the morphology is epithelial. Resistance will inevitably occur for the second-line therapy fulvestrant. Therefore, this is a highly valuable tool in extending knowledge of acquired therapeutic resistance to ultimately find targeted treatments to resistant tumour cells. As well as treatment that can inhibit or delay the emergence of resistance.

Purpose:

Parental cell: T47D/S2

Organism: Human

Tissue: Breast

Model: Tumour line

Gender: Female

Isotype:

Reactivity:

Selectivity:

Host:

Immunogen:

Immunogen UNIPROT ID:

Sequence:

Growth properties:

Production details: The T47D/TR-2 cell line has been established by long term treatment of T47D/S2

cells with 1 uM tamoxifen. Clonal selection was performed in medium without tamoxifen. After growth in presence of 1 uM tamoxifen for 10 months, the growth rate was similar to the parental cells.

Formulation:

Recommended controls:

Bacterial resistance:

Selectable markers:

Additional notes:

Target details

Target: Oestrogen receptor

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application: Determining molecular mechanisms around tamoxifen resistance

Application notes: The T47D/TR-2 cell line is a breast cancer cell line resistant to tamoxifen. This cell line has been established from T47D/S2 cells. T47D/TR-2 is adherent and the morphology is polygonal epithelial. T47D/TR-2 cells oestrogen receptor (alpha) positive and express progesterone receptor, although at a reduced level compared to parental T47D/S2 cells. Antioestrogen resistance is a major problem in breast cancer treatment. Therefore, the search for new therapeutic targets and biomarkers for antiestrogen resistance is crucial. This cell line allows the study of the mechanisms involved in tamoxifen resistant breast cancer cell growth.

Handling

Format: Frozen

Concentration:

Passage number: Passage 164 (AL3575, AL3576)

Growth medium: Phenol red free RPMI 1640 + 2% FCS + glutamax + 8ug Insulin/ml + 1 uMtamoxifen
T47D/TR-2 are growth inhibited by fulvestrant.

Temperature: 37° C

Atmosphere: 5% CO2

Volume:

Storage medium:

Storage buffer:

Storage conditions: Liquid Nitrogen

Shipping conditions: Dry ice

Related tools

Related tools: T47D/S2 Cell Line

References

References: Larsen et al. 2015. PLoS One. 10(2):e0118346. PMID: 25706943. ; Larsen et al. 2015. BMC Cancer. 15:239. PMID: 25885472. ; Aurora kinase B is important for antiestrogen resistant cell growth and a potential biomarker for tamoxifen resistant breast cancer. ; SRC drives growth of antiestrogen resistant breast cancer cell lines and is a marker for reduced benefit of tamoxifen treatment. ; 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.