Breast Cancer Cell Model for PKC alpha over-expression and Tamoxifen resistance

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Technology description

Clinically relevant breast cancer cell lines that can be used to test and validate novel therapeutics for tamoxifen resistant breast cancer.
UIC researchers have developed several clinically relevant breast cancer cell lines in order to investigate the efficacy of novel anti-tumor drugs. The T47D:A18/PKCa cell line was engineered to exogenously overexpress Protein Kinase C alpha (PKCα) which rendered it resistant to tamoxifen. A control cell line has also been generated for the PKCα expression.
The cell lines have been used in in-vitro studies as well as to generate in-vivo mouse xenograft tumor models.
The culture conditions, morphology and growth behavior of the cell lines are well characterized and they have been authenticated using short tandem repeat (STR) and ATCC analysis.
These cell lines have been designed to test and validate novel therapeutics for tamoxifen resistant breast cancer. They are co-owned by UIC and Northwestern University.

Application area

The (T47D:A18/PKCa) with exogenous PKCα over-expression along with the control cell line T47D:A:18/neo can be used:
To study the biology of clinically relevant breast cancer
To examine effects of novel drugs to treat tamoxifen resistant breast cancer

Advantages

These are cells with a stable and robust expression of PKCα.
The PKCα over-expression renders them tamoxifen resistant which is a clinically relevant cell model
They are ready to use for drug discovery and validation studies

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