MCF7/ExeR-4 Cell Line

Catalogue number: 152558
Sub-type: Continuous
Images:

Contributor

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Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: MCF7/ExeR-4 Cell Line

Alternate name: MCF-7/ExeR-4; ExeR-4

Class:
Conjugate:
Description: MCF7/ExeR-4 is a cell culture model mimicking acquired resistance of aromatase inhibitors (AIs) - an anti-cancer therapy. This breast cancer cell line was established from MCF7 cells. The cellular classification is epithelial, and their shape is polygonal. The MCF7/ExeR-4 cell line is resistant to the third generation AI - Exemestane (Aromasin). Third generation AIs have proven to be effective treatment for estrogen receptor positive (ER+) breast cancer and as such are recommended as first line endocrine therapy for postmenopausal ER+ breast cancer patients. However, a major problem is development of resistance against AIs. Previous applications of this cell line include western blot analysis of protein expression. Since molecular mechanisms of AI resistance are largely undisclosed, the development of cell lines resistant to the non-steroidal AI exemestane allows the study of the molecular basis for AI resistance to find new targets for treatment.
Purpose:
Parental cell: MCF7
Organism: Human
Tissue: Breast
Model:
Gender: Female
Isotype:
Reactivity:
Selectivity:
Host:
Immunogen:
Immunogen UNIPROT ID:

Sequence:
Growth properties: Breast cancer cell line resistant to the aromatase inhibitor exemestane. Estrogen receptor positive.
Production details: Exemestane-resistant cell lines were established from MCF-7 cells grown in medium with 10% NCS and 10-7 M testosterone. A culture of MCF-7 cells were treated with 10-7 M exemetane for one week, trypsinised and seeded in serial dilutions in 24-well plates. Single colonies were transferred to new wells and gradually expanded in medium with exemestane. After ~2-3 months, the isolated colonies gave rise to exemestane-resistant cell lines, which could be grown in exemestane-containing medium with ...
Formulation:
Recommended controls:
Bacterial resistance:
Selectable markers:
Additional notes:

Target details

Target: Exemestane resistance

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application: Investigation of molecular mechanisms of exemestane resistance
Application notes: Human breast cancer cell line derived from MCF-7 cells Other related cell lines: - LetR-1, LetR-2, LetR-3 and LetR-4 resistant to the non-steroidal AI letrozole - ExeR-1, ExeR-2 and ExeR-3 resistant to the steroidal AI exemestane - AnaR-1, AnaR-2, AnaR-3 and AnaR-4 resistant to the non-steroidal AI anastrozole Passage 432 (AL3949, AL3950)

Handling

Format: Frozen
Concentration:
Passage number: Passage 432 (AL3949, AL3950)
Growth medium: Phenol-red-free DMEM/F12 medium supplemented with 10% newborn calf serum, 2.5 mM Glutamax, 6 ng/ ml insulin, 0.1 uM testosterone and 0.1 uM exemestane.
Temperature: 37° C
Atmosphere: Humidified air with 5% CO2
Volume:

Storage medium:
Storage buffer:
Storage conditions:
Shipping conditions: Dry ice

Related tools

Related tools: MCF7/ExeR-1 Cell Line Other related cell lines: - LetR-1, LetR-2, LetR-3 and LetR-4 resistant to the non-steroidal AI letrozole - ExeR-1, ExeR-2 and ExeR-3 resistant to the steroidal AI exemestane - AnaR-1, AnaR-2, AnaR-3 and AnaR-4 resistant to the non-steroidal AI anastrozole

References

References: Hole et al. 2015. Breast Cancer Res Treat. 149(3):715-26. PMID: 25667100. ; Hole et al. 2015. Int J Oncol. 46(4):1481-90. PMID: 25625755. ; Aurora kinase A and B as new treatment targets in aromatase inhibitor-resistant breast cancer cells. ; New cell culture model for aromatase inhibitor-resistant breast cancer shows sensitivity to fulvestrant treatment and cross-resistance between letrozole and exemestane.