A2780 PTX(8) resistant cell line

Catalogue number: 160730
Sub-type: Continuous
Images:

Contributor

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Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: A2780 PTX(8) resistant cell line

Alternate name:

Class:
Conjugate:
Description: The paclitaxel (PTX) resistant A2780 PTX (8) cell line with collateral sensitivity to cisplatin (CDDP) (inverse resistance) has been developed by continuous growing of A2780 PTX (4) cell line (cat. no 160729) in 8 nM PTX concentration (for details see Fig. 1). The half maximal inhibitory concentration (IC50) for PTX is about four times as high the IC50 for A2780, whereas for CDDP it is about twice lower (for details see Tab. 1). PTX and CDDP are standard chemotherapeutic drugs used in the treatment of ovarian cancer and acquired resistance to them remains a major obstacle in therapy. The trend of developing the inverse resistance is dominant in clinical practice, therefore A2780 PTX (8) cell line with other sublines of the series (see Notes for details) can be used as a primary tool for deciphering the molecular and cellular mechanisms of drug resistance in ovarian cancer. This cell line was generated as part of a series of isogenic ovarian cancer lines with gradually changing inverse resistance to PTX (resistant) and CDDP (sensitive); see A2780 PTX (4) Cat no:160729, A2780 PTX (16) Cat no:160731, A2780 PTX (32) Cat no:160732, A2780 PTX (64) Cat no:160733, and A2780 PTX (128) Cat no:160734 for the others (see Tab. 1 and Fig. 2 for details). Transcriptomes of six sublines were sequenced and the mRNA dataset was deposited under Gene Expression Omnibus Accession No GSE159791.Patent number: 233178
Purpose:
Parental cell: A2780
Organism: Human
Tissue: Ovary
Model: Tumour line
Gender:

Isotype:
Reactivity:
Selectivity:
Host:
Immunogen:
Immunogen UNIPROT ID:
Sequence:
Growth properties: Adherent
Production details: Split sub-confluent cultures (70-80%) seeding at 4 x 1000 (tolerated range: 1 x 1000 to 1 x 10 0000) cells/cm2 preferably using cell dissociation solution (CDS: 0.3g Na2EDTA, 8 g NaCl, 0.56 g sodium bicarbonate, 1 g D-glucose and 0.4 g KCl per 1000 ml H2O; filter sterilized) or TrypLE ExpressTM, 5% CO2, 37oC. Culture cells without drug until they have been fully adhered (after 24 h).
Formulation:
Recommended controls:
Bacterial resistance:
Selectable markers:
Additional notes:

Target details

Target: Paclitaxel resistance

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application:
Application notes: This cell line was generated as part of a series of isogenic ovarian cancer lines with gradually changing inverse resistance to PTX (resistant) and CDDP (sensitive); see A2780 PTX (4) Cat no:160729, A2780 PTX (16) Cat no:160731, A2780 PTX (32) Cat no:160732, A2780 PTX (64) Cat no:160733, and A2780 PTX (128) Cat no:160734 for the others (see Tab. 1 and Fig. 2 for details). Transcriptomes of six sublines were sequenced and the mRNA dataset was deposited under Gene Expression Omnibus Accession ...

Handling

Format: Frozen
Concentration:

Passage number:
Growth medium: RPMI 1640 medium + 2mM L-alanine-L-glutamine (GlutaMAXTM) + 5% heat-inactivated Foetal Bovine Serum (FBS) , at 37??Â°C and 5% CO2. To keep the stability of resistance profile not using antibiotics and antimycotics is recommended. Cells should be cultured without PTX (up to 10 days) to avoid the resistance escalation. After this time the maintenance treatment with 8 nM PTX for one passage is recommended.
Temperature:
Atmosphere:
Volume:
Storage medium:
Storage buffer:
Storage conditions:
Shipping conditions: Dry ice

Related tools

Related tools:

References

References: Szenajch et al. 2020. Int. J. Mol. Sci. 21(23): 9218. PMID: 33287223