2fTGH-U3A Cell Line

Catalogue number: 151810
Sub-type: Continuous
Images:

Contributor

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Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: 2fTGH-U3A Cell Line

Alternate name:

Class:
Conjugate:
Description: The 2fTGH-U3A Cell Line is part of a panel of IFNy pathway mutant fibrosarcoma cell lines isolated by chemical mutagenesis of IFNy insensitive reporter cells derived from HT1080 cells. Knockout genes have been identified and span multiple members of the IFMy pathway. These cell lines are be useful for the in vitro study and comparison of disrupted interferon signalling at multiple points across the IFN pathway. The following cell lines are part of the group of IFN signalling mutants: U4C, U2A, U3A, 2FTGH, U6A, U5A. Each containing a different mutation in the IFN signalling pathway. MCF7/TAMR-7 cells are oestrogen receptor positive and progesterone receptor negative. MCF7/TAMR-7 cells are growth inhibited by the pure antioestrogen fulvestrant. The oestrogen receptor is a major driver of growth of MCF7/TAMR-7 cell.The TAMR lines were established from the MCF7/S0.5 cell line, which was adapted to grow with 0.5% fetal calf serum in phenol red containing DMEM/F12 medium. Treatment with tamoxifen was started in passage 351. Few colonies of cells survived the treatment and after 28 days of tamoxifen treatment, tamoxifen was omitted from the medium for 22 days. After 19 passages without tamoxifen (passage 372) the cells underwent a second treatment with tamoxifen which initially reduced cell growth rate, but around 390-400 the growth rate of the tamoxifen resistant cell lines was close to the growth rate of the parental MCF7/S0.5 cells.
Purpose:
Parental cell: HT 1080
Organism: Human
Tissue:
Model: Mutant
Gender:
Isotype:

Reactivity:
Selectivity:
Host:
Immunogen:
Immunogen UNIPROT ID:
Sequence:
Growth properties:
Production details: Human; HT1080 human sarcoma cell lines transfected with a vector encoding a selectable marker regulated by interferon to create the 2fTGH cell line, enabling selection of mutations in genes encoding components of the interferon signalling pathway. Chemical mutagenesis of the 2fTGH cell line enabled isolation of 10 IFNg signalling mutants.
Formulation:
Recommended controls: The wild type 2FTGH human fibrosarcoma as a positive control together with the U5a and U3a IFNB resistant cell lines.
Bacterial resistance:
Selectable markers:
Additional notes:

Target details

Target: IFN signalling mutant U3A

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application:
Application notes:

Handling

Format: Frozen
Concentration:
Passage number:
Growth medium: Parental 2fTGH and mutant cell lines can be grown in DMEM with 10% FCS.
Temperature:
Atmosphere:
Volume:
Storage medium:

Storage buffer:
Storage conditions:
Shipping conditions: Dry ice

Related tools

Related tools: 2fTGH-U2A Cell Line ; 2fTGH Cell Line ; 2fTGH-U6A Cell Line ; 2fTGH-U4C Cell Line ; 2fTGH-U5A Cell Line ; 2fTGH-U4A Cell Line

References

References: Haan et al. 2008. J Immunol. 180(2):998-1007. PMID: 18178840. ; Dual role of the Jak1 FERM and kinase domains in cytokine receptor binding and in stimulation-dependent Jak activation. ; Sun et al. 2004. J Interferon Cytokine Res. 24(6):350-61. PMID: 15212709. ; Ectopic expression of toll-like receptor-3 (TLR-3) overcomes the double-stranded RNA (dsRNA) signaling defects of P2.1 cells. ; Guo et al. 2000. Virology. 267(2):209-19. PMID: 10662616. ; Induction of the human protein P56 by interferon, double-stranded RNA, or virus infection. ; Leaman et al. 1998. Proc Natl Acad Sci U S A. 95(16):9442-7. PMID: 9689099. ; A mutant cell line defective in response to double-stranded RNA and in regulating basal expression of interferon-stimulated genes. ; Kohlhuber et al. 1997. Mol Cell Biol. 17(2):695-706. PMID: 9001223. ; A JAK1/JAK2 chimera can sustain alpha and gamma interferon responses. ; Rani et al. 1996. J Biol Chem. 271(37):22878-84. PMID: 8798467. ; Characterization of beta-R1, a gene that is selectively induced by interferon beta (IFN-beta) compared with IFN-alpha. ; Lutfalla et al. 1995. EMBO J. 14(20):5100-8. PMID: 7588638. ; Mutant U5A cells are complemented by an interferon-alpha beta receptor subunit generated by alternative processing of a new member of a cytokine receptor gene cluster. ; McKendry et al. 1991. Proc Natl Acad Sci U S A. 88(24):11455-9. PMID: 1837150. ; High-frequency mutagenesis of human cells and characterization of a mutant unresponsive to both alpha and gamma interferons. ; Pellegrini et al. 1989. Mol Cell Biol. 9(11):4605-12. PMID: 2513475. ; Use of a selectable marker regulated by alpha interferon to obtain mutations in the signaling pathway.