

MMTV TET-LRH-1 Transgenic Mouse

Catalogue number: 153997

Sub-type: Mouse

Images:

Contributor

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Institute: Hudson Institute of Medical Research

Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: MMTV TET-LRH-1 Transgenic Mouse

Alternate name: LRH-1

Class:

Conjugate:

Description: Mouse has no phenotype; when crossed with an appropriate tissue-specific rtTA line, doxycycline administration to the double transgenic line will induce LRH-1 and DsRed expression in the tissue of interest. Induces key genes to regulate metabolic process, ovarian function, cancer cell proliferation, and steroidogenesis. In the breast, LRH-1 modulates and synergizes with endogenous estrogen signaling to promote breast cancer cell proliferation.

Purpose:

Parental cell:

Organism:

Tissue:

Model: Transgenic

Gender:

Isotype:

Reactivity:

Selectivity:

Host:

Immunogen:

Immunogen UNIPROT ID:

Sequence:

Growth properties:

Production details: The pTetOLRH-1 transgene was generated from a construct containing the human LRH-1 open reading frame. A Kozak sequence was introduced by site-directed mutagenesis using the

QuikChange II Site-Directed Mutagenesis Kit (Agilent Technologies) and primers F-Kozak (5'-TTAAGCCAAAGAACTGCCTATAATTTCACTCACCATGGCTTCTAATTCAGATACTGGGGATTACAAG-3) and R-Kozak (5'-CTTGTAATCCCCAGTATCTGAATTAGAAGCCATGGTGAGTGAAATTATAGGCAGTTCTTTGGCTTAA-3). The LRH-1 open reading frame containing the Kozak sequence was then subcloned into the multiple cloning site of the pTRE-Tight-BI-DsRed Express vector (Clontech) after NotI restriction digest. Orientation of the insert was verified by digesting the vector with BamHI. The vector was then linearized using ApaI and gel purified. The pTetOLRH-1 founder mice were generated by pronuclear injection (MouseWorksService) of the purified transgene, and complete transgene insertion was verified using primers that spanned the 3' end of the DsRed open reading frame (L1) (forward 5'-GCCGATGAACTTCACCTTGT-3 and reverse 5'-CGAGGACGTCATCAAGGAGT-3') and the 3' end of the LRH-1 open reading frame (L2) (forward 5'-TCGACCACATTTACCGACAA-3 and reverse 5'-TGGCTGATTATGATCCTCTGG-3). MMTVrtTA-pTetOLRH-1 (MMTVtet-LRH-1) double-transgenic mice were generated by crossing pTetOLRH-1 founder females with MMTVrtTA males. Genotyping of double-transgenic animals was performed using the primers for LRH-1 listed above and MTB forward (TGCCGCCATTATTACGACAAGC) and reverse (ACCGTACTCGTCAATTCCAAGGG).

Formulation:

Recommended controls: No

Bacterial resistance:

Selectable markers:

Additional notes: Breast Cancer

Target details

Target: Liver Receptor Homolog-1

Target alternate names:

Target background:

Molecular weight:

IC50:

Applications

Application:

Application notes:

Handling

Format:

Concentration:

Passage number:

Growth medium:

Temperature:

Atmosphere:

Volume:

Storage medium:

Storage buffer:

Storage conditions:

Shipping conditions: Embryo/Spermatozoa- Dry Ice

Related tools

Related tools:

References

References: Prasad et al. 2015. J Biol Chem. 290(28):17262-8. PMID: 26013822. ; Generation of a Potent Low Density Lipoprotein Receptor-related Protein 1 (LRP1) Antagonist by Engineering a Stable Form of the Receptor-associated Protein (RAP) D3 Domain.