Also Known As:HCV core

Tg(tetO-HCV)1Mlch hemizygotes are bred to mice expressing the Cebp-I TA (LaptTA) transgene and maintained on doxycycline through weaning to replicate the timing of hepatitis C infection in humans. Hepatic steatosis is observed at two months of age. This mutant mouse strain may be useful in studies of hepatic steatosis and hepatitis C infection.

Donating Investigator

Robert V Farese, Jr., Harvard University School of Public Health
Hemizygotes: To mimic hepatitis C infection in humans, Tg(tetO-HCV)1Mlch hemizygotes are bred to mice expressing the Cebpb-tTA (LaptTA) transgene and maintained on doxycycline through weaning to replicate the timing of hepatitis C infection in humans. Following withdrawal of doxycycline (dox), 50 to 60% of hepatocytes express the HCV core; expression is localized to the cytoplasmic vesicle membrane. HCV-positive hepatocytes are distributed randomly within the liver lobules. Expression is not detected in any of the other tissues tested. Mice do not exhibit significant hepatic inflammation although aminotransferase levels are elevated at one month after dox withdrawal. Hepatic steatosis is observed at two months of age; initially appearing as prominent microvesicular steatosis the pattern evolves to low-level macrovesicular steatosis paralleling the reduction in HCV-core expressing hepatocytes that occurs over time. This mutant mouse strain may be useful in studies of hepatic steatosis and hepatitis C infection.
Genotyping Protocols
Standard PCR: Tg(tetO-HCV)1Mlch
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, mice hemizygous for the transgene may be bred together or to wildtype siblings.

Additional Breeding and Husbandry Support

Citation
When using the HCV core mouse strain in a publication, please cite the originating article(s) and include MMRRC stock #36053 in your Materials and Methods section.

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

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