

Animal Models

The following facilities provide mouse breeding services for use in scientific research:

Mutant Mouse Regional Resource Center - University of California, Davis

Below is a list of available Mecp2 Mice strains at UC Davis MMRRC; for a searchable index click [here](#) .

B6.Cg-Mecp2tm1.1Jae/Mmcd

Gene or Allele - methyl CpG binding protein 2 / targeted mutation 1.1, Rudolf Jaenisch

Mutation type - Knockout

Availability - Live Colony

B6.Cg-Mecp2tm1Jae/Uta

Mecp2tm1Jae - methyl CpG binding protein 2 / targeted mutation 1, Rudolf Jaenisch

Mutation type - Knockout

Availability - Cryo-archive

B6;129-Mecp2tm1Jae MMRRC:011918-UCD

Mecp2tm1Jae - methyl CpG binding protein 2 / targeted mutation 1, Rudolf Jaenisch

Mutation type - Knockout

Availability --Live Colony

B6;129X1-Mecp2tm2Csb

Mecp2tm1Csb - methyl CpG binding protein 2 / targeted mutation 1, Cecile Spielowoy Blaustein

Mutation type - Knock-In

Currently Unavailable - inquire at MMRRC for further information on availability

SIGTR ES cell line BC0189

Mecp2 - methyl CpG binding protein 2

Mutation type - Gene Trap

Availability - ES cell line

Note: Sanger Institute Gene Trap MTA required

STOCK Mecp2tm1.1Jae/Mmcd

Mecp2tm1.1Jae - methyl CpG binding protein 2 / targeted mutation 1.1, Rudolf Jaenisch

Mutation type - Knockout

Availability - Cryo-archive

A Standard MMRRC User MTA is required for requesting stocks, please check their website for further information.

If you have any questions about the strain please contact the MMRRC at UC Davis or 530-754-8686.

Mecp2 mutant mouse strains now available at Jackson Labs

[Click here](#) for a searchable index.

JAX Mice Database - 008679 FVB-Tg(MECP2)1Hzo/J

Stock# - 008679 Strain name - FVB-Tg(MECP2)1Hzo/J JAX® Mice Database

JAX Mice Database - 006849 B6;129P2-Mecp2
/J

Stock# - 006849 Strain name - B6;129P2-Mecp2/J JAX® Mice Database

JAX Mice Database - 003890 B6.129P2(C)-Mecp2 /J

Stock# - 003890 Strain name - B6.129P2(C)-Mecp2/J JAX® Mice Database

JAX Mice Database - 005439 B6.129S-Mecp2 /J

Stock# - 005439 Strain name - B6.129S-Mecp2/J JAX® Mice Database

JAX Mice Database - 006847 B6;129P2-Mecp2 /J

Stock# - 006847 Strain name - B6;129P2-Mecp2/J JAX® Mice Database

JAX Mice Database - 007177 B6.129P2-Mecp2
/J

Stock# - 007177 Strain name - B6.129P2-Mecp2/J JAX® Mice Database

Please Note: Numerous other strains of mutant mice of potential interest to RTT researchers are available through the Jax Labs – www.jax.org.

Other Resources for Novel Animal Generation:

Charles River Labs and genOway have established a collaboration to substantially reduce development time and increase efficiency in generating novel, genetically engineered mouse models for research. This unique partnership provides access to genOway's proprietary range of animal creation technologies and Charles River's expertise in animal breeding and characterization through the combined expertise and resources of two market leaders.

VelociGene is the industry leader for the rapid production of targeted embryonic stem (ES) cells: twelve weeks from concept to targeted allele. VelociGene is a provider of customized genetically altered embryonic stem cells and mice. Their established reputation for reliability, high-throughput capacity, and cutting edge technology for making knock-out and conditional alleles, or compound genetic alterations makes VelociGene ideally suited for small or large scale production of genetically altered mice. Leaders of academia, industry, and non-profit organizations have benefited from VelociGene's commitment to technological precision and on-time delivery. By combining VelociGene's ground-breaking, gene-altering technology, together with a newly developed VelociMouse® technology, mouse cohorts suitable for phenotyping on inbred strain backgrounds can be delivered within months instead of years.

General Mouse Breeding Tips

- Make sure the mother is not disturbed for about 3 days before and 3 days after giving birth (i.e. strictly no cage changes, no new bedding, no moving the cage around to different positions in the rack). Place a "Do Not Disturb" notice on the cage.

- Change the breeding females regularly, females with symptoms are no use for breeding, so they should be checked regularly and changed when they are not much over 6 months old.

- If the MeCP2 het females are small at the time when they'd normally start breeding, don't set them up yet. Try giving them mash (soft food) and give them a week or two to get bigger before trying to breed with them.
- Keep a male mouse in the cage with the expecting mother. This seems to be more important for the C57Bl/6 background, but may also help somewhat with other backgrounds as well.
- Try to face the cages of breeding pairs so that they can see a light in the room, or if possible, the light of a window.
- Just a small handful of irradiated sunflower seeds when you put on the "do not disturb" sign may help to reduce infanticide.
- It seems that the first generations after the gene has been deleted (by crossing with Cre mice) are easier to breed than the later backcross generations. Whether this is due to having a mixed strain background (most likely) or fewer generations without Mecp2 is yet to be determined. To redelete you would need floxed mice and Cre mice.