

## Genetic Testing Services

Scenario	Issue	Applicable Service
Breeding an outbred colony of CD-1 mice with random breeding between stock animals	Breeding within a closed colony results in some degree of inbreeding or loss of heterozygosity	Background Strain Characterization
Begin breeding a homozygous transgenic line	Identification of homozygotes	Zygoty Determination
A mouse is seen scurrying under a rack of cages	Possible misbreeding	Background Strain Characterization
An escaped white mouse was caught and put in a cage	Identification of strain/ Identification of line	Background Strain Characterization/Custom PCR
An investigator wants only homozygous transgenic rats, but they are sterile	Identification of homozygotes	Zygoty Determination
An inbred rat line that usually has three or four pups per litter is now getting 8-10 pups	May be due to heterozygote advantage, indicating a possible misbreeding	Background Strain Characterization
The phenotype of a knockout on a NOD background has suddenly changed	May be due to heterozygote advantage, indicating a possible misbreeding	Strain-Specific Genetic Verification: NOD testing
There are several lines of RNAi knockdown mice targeting different regions in the gene of interest	Determining efficacy of knockdown	Molecular Phenotyping
There may have been a mix-up between SCID and wild-type mice	Identification of SCIDs	Strain-Specific Genetic Verification: SCID Testing
A collaborator sends a knockout line and the wild-type control, but does not include cage cards	Identification of knockout	PCR Genotyping



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