Invitrogen BioReliance® LADS Genotyping

Move a transgene / knockout from one background strain to another in 5 generations instead of 10.

Each generation is analyzed by PCR for microsatellite markers spaced at ~20cM thru the 19 autosomes. Fragment size differences are analyzed, and at each generation a report is provided identifying which animals carry the highest number of acceptor chromosomes. These animals are then used as breeders for the next generation. The approach will move the transgenic line to the congenic strain of choice in only 5 generations instead of 10, which typically reduces time from 3 years down to 1.5 years, saving time and money.

General Methodology:

1. Investigator provides tail samples from background donor and acceptor mice, as well as any available information such as transgene used to obtain line, sequence, data obtained from identification of the transgenic line, etc.
2. Invitrogen characterizes both backgrounds to determine the microsatellite markers that provide the most accurate data.
3. Investigator sends 20 tail samples from N2 generation for genotyping analysis.
4. In N2 generation genotyping, samples are analyzed for a microsatellite marker in each one of the autosomes. Invitrogen provides a report indicating which animal(s) are the best breeder(s) for the next generation.
5. In N3 generation genotyping, the autosomes that were still heterozygotes in N2 are analyzed as described above. The chromosomes that were homozygotes are analyzed with a different set of markers, to rule out cross over. This step is repeated in N4 and N5.
6. A final analysis of 2 animals is done to confirm background.

Approximate Cost (please inquire for pricing tailored to your project):

Background Characterization……..$4,000
Genotyping…… $12,000-$15,000
Transgenic Diagnostic PCR…….....$25.00 / animal

Call or email us today to speak with someone about your project: email: ahs@bioreliance.com
toll free: 800.804.3586, toll direct: 301.610.2227.

invitrogen™