

Phenotyping: Obesity Panel

Charles River Discovery Services provides a variety of therapeutic phenotyping panels to assist with characterizing your unique models.

Our Obesity Panel includes:

Basic Characterization

- *PhenoFirst® Panel*

PhenoFirst® includes *in vivo* evaluation, basic pathology, and basic clinical pathology. This panel targets organs of white and brown adipose tissue, as well as adrenal, thyroid, and pituitary glands. The minimum recommended sample size is three homozygous or knockout mice and three wild type controls that are matched for age, sex, health status, and genetic background.

Additional Characterization

- *Age of Onset Study/Growth Curve*

A breeding colony is set up at Charles River to monitor offspring body weight. Weekly body weight measurements begin at three weeks of age for all offspring. The resulting data is used to generate a growth curve. The minimum recommended sample size is five breeding pairs that produce sufficient litters to generate 10 offspring of each sex and genotype being characterized.

- *Food Consumption and Growth Curve*

A breeding colony is set up at Charles River to monitor offspring body weight and food consumption. Weekly body weight and food consumption measurements begin at three weeks of age for all offspring. The resulting data is used to generate a growth curve and food consumption analysis. The minimum recommended sample size is five breeding pairs that produce sufficient litters to generate 10 offspring of each sex and genotype being characterized.

- *Rodent Multi-Analyte Profile plus Blood Glucose Level*

Each animal is screened for 60 plasma biomarker levels including insulin, leptin, and growth hormone. As the plasma sample is collected, blood glucose level is also analyzed. The minimum recommended sample size is five homozygous or knockout mice and five wild type controls that are matched for age, sex, health status, and genetic background.

- *Body Composition Assessment*

A DEXA Scan is performed to determine percent total body fat, total bone mineral density, and total bone mineral concentration. The minimum recommended sample size is 10 homozygous or knockout mice and 10 wild type controls that are matched for age, sex, health status, and genetic background.

- *Glucose Tolerance Test*

Animals are fasted overnight and a baseline blood glucose level is recorded. A glucose challenge is delivered orally and blood glucose levels are screened at 0, 15, 30, 45, 60, 90, 120, 150, and 180 minutes post-challenge. The minimum recommended sample size is three homozygous or knockout mice and three wild type controls that are matched for age, sex, health status, and genetic background.

Customized Characterization

We recognize that research goals vary. Our team of laboratory animal professionals is available to customize a model characterization plan that meets individual needs and helps you achieve your goals more efficiently.

Available Panels

In addition to the Obesity Panel, Discovery Services provides targeted phenotyping to characterize metabolism, hypertension, osteoporosis, diabetes, reproduction issues, embryonic lethality, respiratory function, Huntington's disease, and neurodegenerative disease in your unique model.

For more information, please call 1.877.CRIVER.1 or e-mail askcharlesriver@crl.com.