Model Name
Cholesterol, Serum (Total, HDL, LDL, Total & HDL Ratio), Diet-Induced, Mouse

Item Number
518510

Introduction
Cholesterol is a lipid needed by the body for many important functions. High serum cholesterol, however, together with other fatty materials (e.g., high levels of LDL and/or low levels of HDL and/or high levels of triglycerides) can result in atherosclerotic plaque with increased risk of developing heart disease and stroke. This animal disease model is caused by a diet high in cholesterol and saturated fat or by having an inherited condition that causes elevated cholesterol levels.

Procedure Summary
Groups of 6 ICR derived male mice weighing 22 ± 2 g are made hypercholesteremic by being fed a high cholesterol/choleic acid diet (g/100g: lard, 2; coconut oil, 8; cholesterol, 1; cholic acid, 0.3; choline chloride, 0.3; standard chow, 71.9) for 7 days. Test substance is administered by PO gavage on day 5, 6 and 7. After fasting overnight, blood serum is obtained from each mouse and assayed for total cholesterol (Total), high density lipoprotein (HDL), low density lipoprotein (LDL) and percent change in CHOL/HDL. One-way ANOVA and Dunnett’s test are applied for comparison between treated and vehicle control groups. Significance is considered at p<0.05.

Suggested Testing
• n=6/group (study design dependent)
• Doses may be administered PO, IV, IP and SC
• Assessments available: Biomarkers and histology services may be performed upon request.

Turnaround Time(s)
• For Acute Assays: 4 weeks from sample receipt
• For Subacute Assays: 6 weeks to 3 months

Literature

Related Assay(s)  (Item # - Assay Name - Species)
518000 - Cholesterol, Normal Serum (Total, HDL, LDL, TG) - Mouse
518030 - Cholesterol, Serum (Total, HDL, LDL, TG) Diet-Induced Guinea Pig - Guinea Pig
518050 - Cholesterol, Serum (Total, HDL, LDL, TG) Diet-Induced - Hamster

Modified Protocols
We will readily accommodate client-specified alterations.

Laboratory
These assays are performed at our AAALAC accredited laboratory in Taipei.

Animal Welfare
All aspects of this work is performed in general accordance with the Guide for the Care and Use of laboratory animals (National Academy Press, Washington, DC, 2011). The study protocol was approved by the Pharmacology Discovery Services IACUC and is performed with the oversight of veterinarians to assure the humane treatment of laboratory animals.
Reference Compound(s)
* Bezafibrate, Cholestyramine, Clofibrate, D-Thyroxine, Lovastatin, Probucol

Last modified November 20, 2017