Model Name
Cholesterol, Serum (Total, HDL, LDL, TG) Diet-Induced, Guinea Pig

Item Number
518030

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 male guinea pigs weighing 350 ± 50 g are fed a high-fat diet of laurate (g/100g: palm kernel oil, 15; cholesterol 0.1; standard chow, 84.9) throughout the experiment. Test substance and/or vehicle is administered orally once daily for 13 consecutive days one week after beginning the high-fat laurate diet. After fasting overnight, blood samples are obtained from the retro-orbital sinus of each animal 5 minutes before initial test substance and/or vehicle administration (pre-treatment) and 24 hours after the last dosing (post-treatment). The serum total cholesterol (Total), low density lipoprotein (LDL), high density lipoprotein (HDL) and triglyceride (TG) are assayed by an enzymatic method (Wako total cholesterol, LDL, HDL & TG diagnostic kit and Hitachi Automatic Analyzer Model 7050). 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
Aoki et al. Arzneim-Forsch./Drug Res. 51(I) 197-203, 2001

Related Assay(s)  (Item # - Assay Name - Species)
518000 - Cholesterol, Normal Serum (Total, HDL, LDL, TG) – Mouse
518050 - Cholesterol, Serum (Total, HDL, LDL, TG) Diet-Induced – Hamster
518510 - Cholesterol, Serum (Total,HDL,LDL,Total/HDL Ratio), Diet-Induced - Mouse

Modified Protocols
We will readily accommodate client-specified alterations.

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

For current details about our Company address and contact information, please reference our website
http://www.pharmacologydiscoveryservices.com/company-info/
Animal Welfare
All aspects of this work are 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 Compounds
Bezafibrate, *Lovastatin, Probucol

Last modified October 1, 2018