Model Name
Diabetes, Type I, Streptozotocin-Induced, Mouse

Item Number
541000

Introduction
Streptozotocin (STZ) is currently the most used diabetogenic agent in new anti-diabetic drugs in experimental animals. This study aims to evaluate the therapeutic efficacy of STZ induced different glucose response.

Procedure Summary
Test substance is administered orally (PO) to a group of 5 ICR derived male or female mice weighing 24 ± 2 g, 48 hours after challenge with streptozotocin (160 mg/kg i.v.). Serum glucose is determined by an enzymatic method (Mutarotase-Glucose Oxidase) from orbital sinus blood samples, obtained from each non-fasted animal, 5 minutes before and 90 minutes after test substance administration. ANOVA followed by Dunnett’s test is applied for comparison between vehicle control and compound treated groups. Differences are considered significant at P < 0.05.

Suggested Testing
• n=5/group (study design dependent)
• Doses may be administered PO, IV, IP and SC

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)
541010 – Diabetes, Type I, Streptozotocin-Induced – Rat

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 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
Acarbose, Glibenclamide, * Insulin (s.c.), Tolbutamide, Metformin

Graph

*P<0.05, treated vs. vehicle control; one-way ANOVA followed by Dunnett's test.

Last modified October 1, 2018