**Model Name**
Potassium Channel [KATP] Agonism/Antagonism

**Item Number**
568020

**Introduction**
The ATP-sensitive potassium (KATP) channel links the metabolic state to membrane electrical excitability in pancreatic β cells. In pancreatic β cells, the KATP channel couples elevation in the blood glucose level to insulin secretion. ATP-sensitive potassium (KATP) channels are a major drug target for the treatment of type-2 diabetes.

**Procedure Summary**
Test substance is administered p.o. (30 mg/kg) to 5 ICR male or female overnight-fasted mice weighing 22 ± 2 g and blood samples are obtained 60 minutes later. A 30 percent or more (³30%) increase or decrease in serum glucose indicates possible receptor agonist or antagonist activity, respectively.

**Suggested Testing**
- n=6/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)**
N/A

**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)**
* Diazoxide, * Glibenclamide

Last modified November 20, 2017