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🌐 UC Davis - Intraperitoneal Glucose Tolerance Test

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We use this protocol and it's working

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Abstract

Summary:

An intraperitoneal Glucose tolerance test or ipGTT is designed to determine clearance of an intraperitoneally injected glucose load from the body. Animals are fasted for approximately 16 hours, a solution of glucose is administered by intraperitoneal (IP) injection and blood glucose is measured at different time points during 2 hours post-injection.

Materials

MATERIALS

⊗ 45% GLUCOSE SOLUTION **Fisher Scientific Catalog** #NC0025179(50-165-7017 substituti

⊗ Insulin Syringes **Fisher Scientific Catalog** #14-826-79

⊗ Saline Solution **Fisher Scientific Catalog** #L97753

⊗ Easy Check Glucose test strips **JRS Medical Catalog** #00-101(new SKU 88982400)

⊗ Easy Check Glucose monitor **JRS Medical Catalog** #Y4209 (new SKU 88972401)

Reagent Preparation:

Dilute the glucose stock solution (45%) with saline to 20% by adding 20ml stock to 25ml 0.9% (w/v) sterile saline.

Troubleshooting

1   Fast mice for 16hours by taking away food the day before (3:00pm)

2   The following day, Calibrate the glucose meter according to the manufacturer's instructions.

3   Deprive mice from water then remove approximately 5 µl of blood (one drop) from thetail via a tail tip cut and transfer directly onto a glucose indicator strip.

4   Measure blood glucose immediately in a glucometer

5   Give the mouse an intraperitoneal injection of Glucose (2g/kg) with a 27 G needle

6   Continue to take blood samples from the initial tail cut before the glucose injection and at 15, 30, 60 and 120 min.
     Between each of these time points, return the mouse to its cage and monitor it every minute.

7   **NOTE:**

     At the end of the experiment, wipe tail with 70% alcohol and allow drying. Ensure that blood loss from the tail stopped before placing the animal back to its cage.