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Working

Case - Intraperitoneal Insulin Tolerance Test [↗](#)

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[dx.doi.org/10.17504/protocols.io.yeffbn](https://doi.org/10.17504/protocols.io.yeffbn)

Mouse Metabolic Phenotyping Centers

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ABSTRACT

Summary:

This is the standard protocol for routine insulin tolerance testing. It is performed on awake mice, fasted for 18 hr (overnight) or for 6 hours.

EXTERNAL LINK

<https://mmpc.org/shared/document.aspx?id=272&docType=Protocol>

MATERIALS

NAME	CATALOG #	VENDOR	CAS NUMBER	RRID
Insulin	View	Eli Lilly		
1cc syringe 26g		BD Biosciences		
Glucometer Alphasnak	cfgs185-m0285	Abbott		
Alpha trak2 Glucose strips	Alpha trak2 Glucose strips	Abbott		
Clotisol	T212002	Amazon		

MATERIALS TEXT

Reagents and Materials:

Reagent/Material	Quantity Required	Vendor	Stock Number
Insulin	0.75U-1.0U per mouse	Eli Lilly	
1cc syringe 26g	1/mouse	BD	
Glucometer Alphasnak	1	Abbott	cfgs185-m0285
Alpha trak2 Glucose strips	5 per mouse	Abbott	
Clotisol	100ul	Amazon	T212002

Note:

BD Biosciences, [RRID:SCR_013311](#)

Abbott, [RRID:SCR_010477](#)

¹ Fast mice for overnight or for 6 hours. Remove mouse from cage and put into a clean cage with water and no food.

- 2 Label the mice using a marker on their tail to quickly tell them apart
- 3 Weigh each mouse and record weight. Calculate the amount of insulin needed for 0.75U to 1.0 U /kg body weight. Record the volume for each mouse.
- 4 Dilute the stock of insulin (100U/ml) to 0.1u/ml
- 5 Take a glucose reading and record it as time zero. Dip tail into clotisol to clot blood.
- 6 Inject each mouse 3' apart. Repeat #4 at 15min, 30 min, 60 min after IP injection of insulin.
- 7 Return mice to cage with food.



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