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We use this protocol and it's working

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U Mass - STZ-induced type 1 diabetes model

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ABSTRACT

Summary:

Streptozotocin can selectively destroy the pancreatic β -cells with rapid and irreversible necrosis and can be used to generate a chronic model of hyperglycemia and type 1 diabetes.

Keywords: Streptozotocin, pancreatic β -cells, necrosis, type 1 diabetes

MATERIALS

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☒ Streptozotocin **Sigma Catalog #S0130**

☒ Sodium Citrate **Sigma Catalog #71402**

☒ Citric acid **Sigma Catalog #C1909**

Reagent Preparation:

Reagent 1: 0.1 M Na-Citrate

Reagents and Materials: Sodium Citrate, Deionized water

Procedure

1. Dissolve 14.71 g of Na-Citrate in 200 ml water.

Reagent 2: 0.1 M Citric acid

Reagents and Materials: Citric acid, Deionized water

Procedure

1. Dissolve 20.1 g of Citric acid in 200 ml water.

Reagent 3: Streptozotocin in 0.1 M Na-Citrate Buffer

Reagents and Materials: 0.1 M Na-Citrate, 0.1 M Citric acid, Deionized water

Procedure

1. Mix 0.1 M Na-Citrate and 0.1 M Citric acid.
2. Adjust pH to 4.5 with 0.1 M Citric acid.
3. Dissolve streptozotocin in Na-Citrate Buffer.

Note:

Sigma-Aldrich [RRID:SCR_008988](https://www.sigmaaldrich.com/US/en/product/SCR/008988)

- 1 Administer an intraperitoneal injection of streptozotocin (50 mg/kg body weight) daily for 5 days.
- 2 Monitor glucose level for onset of hyperglycemia.