**In Vivo Assessment of Human Islet Potency**

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**ABSTRACT**

Transplantation of insulin-producing cells into immunodeficient mice represents an important tool for the assessment of viability and function of cellular products intended to restore beta cell function in the clinical and research applications. The in vivo bioassay allows for the assessment of the ability of the cellular product to restore and maintain euglycemia in vivo after transplantation into chemically-induced diabetic recipients. Herein we describe the protocol utilized for the in vivo potency assessment of human islet cell products. Modifications of the protocol enable the use of the bioassay for the potency assessment of human or animal insulin-producing cells from adult, neonatal or fetal sources or generated from stem cells.

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