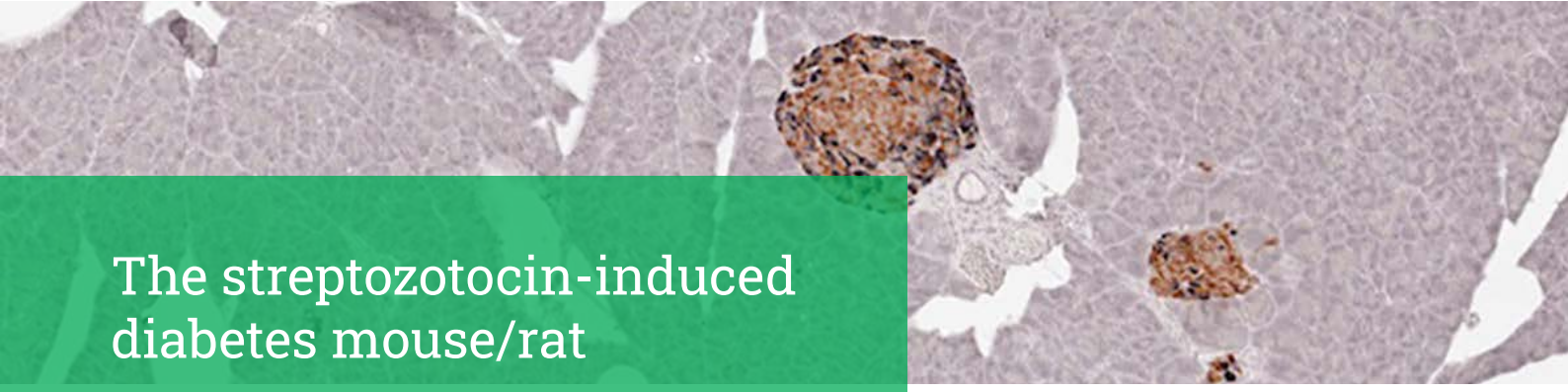


The streptozotocin-induced diabetes mouse/rat

A chemically-induced diabetes model for screening glycemic drug effects.

A screening model for anti-diabetic compound efficacy

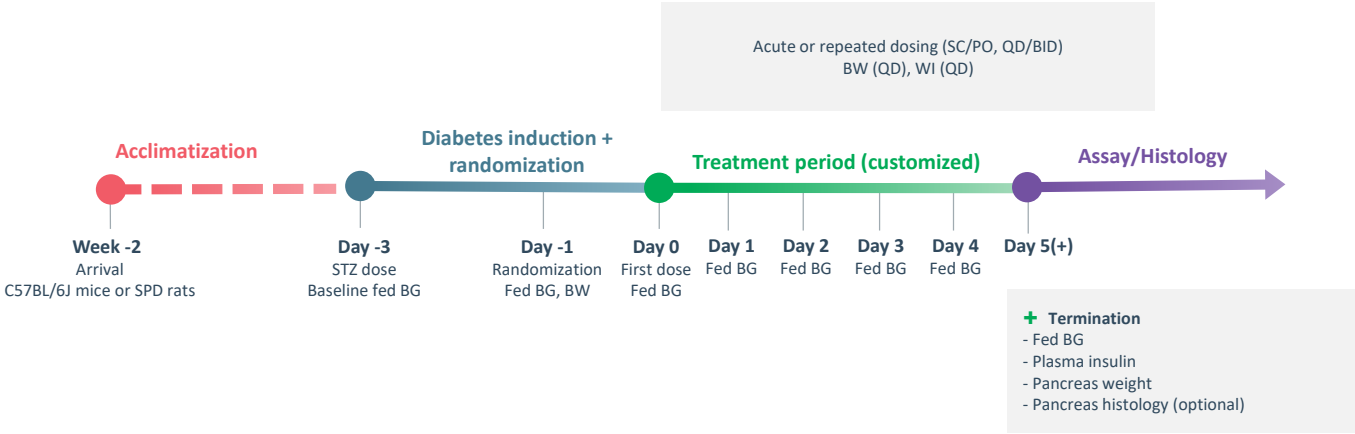
Streptozotocin (STZ) causes acute β-cells depletion resulting in insulin deficiency, hyperglycemia and diabetes. STZ doses can be adjusted to promote either a type 2 or type 1 diabetes-like condition in both mice and rats. STZ models are applicable for screening anti-hyperglycemic efficacy of test compounds.

Key model traits

- Robust and stabile hyperglycemia.
- Fast and predictable induction of insulin deficiency.
- 100% response rate using medium-dose STZ.
- Weight-neutral effects in lean animals.
- Similar diabetic phenotype in mice and rats.
- Treatment efficacy of insulins other anti-diabetic drug classes.

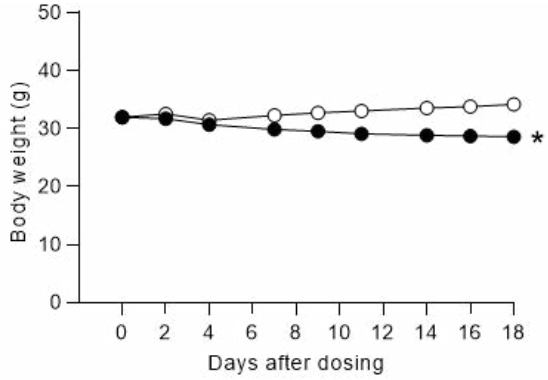
Diet	Regular chow (Altromin 1324) or HFD 60% fat, Ssniff (#D12492)	The diabetic phenotype can be produced in lean or diet-induced obese animals.
Strain	C57BL/6JRj mice Sprague-Dawley rats	

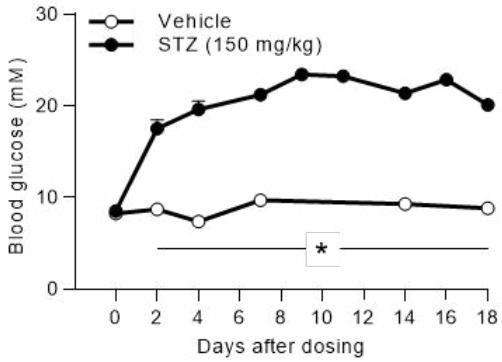
Study outline

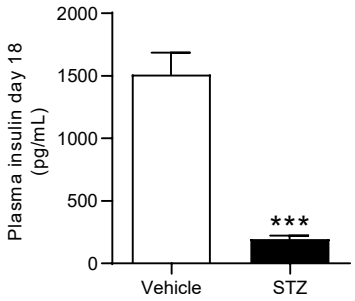


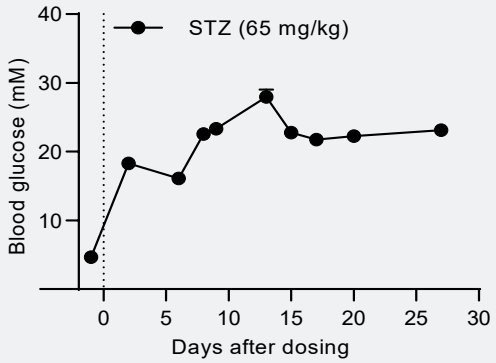
The STZ mouse

A single medium-dose of STZ promotes sustained and robust hyperglycemia and insulin depletion with mild body weight loss in diet-induced obese (DIO) mice. Test compound profiling is performed at stabile hyperglycemia (3-4 days post-STZ).









The STZ rat

A single low-dose of STZ promotes sustained and robust hyperglycemia in lean rats. STZ is weight-neutral. Test compound profiling is performed at stabile hyperglycemia (7-10 days post-STZ). Insulin improves glucose tolerance in STZ rats.