Aug 13, 2019

# Aortic Banding in Mice

Dale Abel[1]

[1]University of Iowa

1 Works for me dx.doi.org/10.17504/protocols.io.3ccgisw

Diabetic Complications Consortium
Tech. support email: rmcindoe@augusta.edu

Lili Liang

ABSTRACT

**Summary:**

This protocol describes the procedure used by the DiaComp for inducing pressure overload hypertrophy in mice.

**Diabetic Complication:**

Cardiovascular

EXTERNAL LINK

https://www.diacomp.org/shared/document.aspx?id=45&docType=Protocol

1 Mice are anesthetized with 1% isoflurane delivered via nose cone. A topical depilatory agent is applied to the neck and chest and the area is cleaned with betadine and alcohol. Mice are placed supine and temperature maintained at 37ºC with a heating pad. A horizontal skin incision ~ 0.5 - 1.0 cm in length is made at the level of the suprasternal notch. The thyroid is retracted and a 2 - 3-mm longitudinal cut is made in the proximal portion of the sternum. This allows for visualization of the aortic arch under low power magnification. A wire with a snare on the end is passed under the aorta between the origin of the right innominate and the left common carotid arteries. A 6-0 silk suture is snared with the wire and pulled back around the aorta. A bent 27-gauge needle is then placed next to the aortic arch and the suture is snugly tied around the needle and the aorta. Following ligation, the needle is quickly removed. The skin is closed and mice are allowed to recover on a warming pad until they were fully awake. The sham procedure is identical except that the aorta is not ligated.