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Mouse - Stellate Isolation Protocol

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1 Works for me dx.doi.org/10.17504/protocols.io.2qegdte

scott john

1 Mouse: C57BL/6J
Sex: M/F
Age: 12 ± 2wks

2 Euthanesia:
Overdose isoflurane (5%), decapitation.

3 Materials:
4x insect pins
1x minutien pins
1x surgical tools (scissors, toothed forceps, straight forceps, iridectomy scissors)
1x foam dissection board (8 x 10 x 1 inch)
1x absorbent pad
2x petri dish with Sylgard
500 mls ice cold physiological salt solution (PSS, in mM: 121 NaCl, 5.9 KCl, 1.2 NaH_2PO_4, 1.2 $MgCl_2$, 25 $NaHCO_3$, 2 $CaCl_2$, 8 D-glucose; pH 7.4 maintained by 95% O2-5% CO_2 aeration)

4
1. Kill mouse with isoflurane overdose (5%), decapitation and exsanguination.
2. Fix limbs to dissection board with pins.
3. Cut open abdomen with transverse incision below xiphoid process with small scissors.
4. Open diaphragm and remove thorax containing heart and lungs.
5. Place thorax in iced PSS for 10 mins.
6. Pin dorsal surface of thorax to Sylgard floor of petri dish and submerse with PSS.
7. Cut ribs bilaterally moving caudal to rostral to remove ventral thorax.
8. Discard lungs and pin heart to left side.

5 9. Locate stellate ganglion under 1st or 2nd rib near costovertebral joint, in close proximity to the spine, next to the subclavian/mammalian artery. The stellate is connected caudally to the paravertebral ganglia. Follow paravertebral chain down to confirm it's the stellate ganglion. The stellate ganglion is the first ganglion larger than the others. The two arms (ansa subclavia) that emerge from the stellate ganglion encircle the subclavian artery.

6 10. Isolate and remove stellate.
11. Pin isolated stellate to Sylgard in clean petri dish.