

CARE AND USE OF CAROTID ARTERY CATHETER WITH MRI VASCULAR ACCESS BUTTON (VAB)

- The purpose of carotid artery catheterization is blood withdrawal.
- Our catheters are made of polyurethane. The catheter is 1-2 French with a square tip.
- The silicone disk VAB used for this procedure is from Instech, cat# VAB62SMBS/25-MRI.
- The catheter should be flushed with sterile saline and refilled with sterile catheter lock solution 6 days after order ship day. This should be repeated every 7 days.
- Use positive pressure technique when flushing the catheter to improve long term catheter patency.
- Aseptic technique must be used when performing this procedure.

Material required:

- Sterile catheter lock solution: We recommend heparin/glycerol (500 IU heparin/ml)
- Sterile 0.9% saline
- Sterile swabs/gauze
- 70% ethanol
- (3) 1 ml syringes with (3) PinPort™ injectors (Instech cat# PNP3M)
 - **Withdrawal Syringe:** Syringe with injector, filled with 0.5 ml sterile saline
 - **Flushing Syringe:** Syringe with injector, filled with 1 ml sterile saline
 - **Lock Solution Syringe:** Syringe with injector, filled with appropriate amount of lock solution

Procedure for maintenance of carotid artery catheter:

1. Immobilize the mouse. We recommend use of isoflurane anesthesia or a commercially available restrainer.
2. Clean the top of the VAB with a sterile swab/gauze dampened with 70% ethanol and let dry.
3. Attach the **Withdrawal Syringe** to the VAB. Withdraw the catheter lock solution until blood is seen in the PinPort™ injector.*
4. Detach the **Withdrawal Syringe** from the VAB. If using the same syringe on additional mice, expel blood from the Withdrawal Syringe.
5. Attach the **Flushing Syringe** to the VAB and flush with 0.05 ml of sterile saline.
6. Detach the **Flushing Syringe** from the VAB.
7. Attach the **Lock Solution Syringe** to the VAB and fill catheter with 0.01 ml of catheter lock solution.
8. Detach the **Lock Solution Syringe** from the VAB.

*If the lock solution cannot be removed, reposition/manipulate the mouse and retry. If the lock solution still cannot be withdrawn, replace the **Withdrawal Syringe** with the **Flushing Syringe** and introduce sterile saline in the catheter.

For additional help with catheter maintenance please contact our Technical Information Service at micetech@jax.org