

# RAT VASCULAR ACCESS BUTTON™ GUIDANCE

1, 2, 3 and 4 channel magnetic rat buttons (part numbers starting with VABR)

## INTENDED USE

The VAB™ was developed for infusing fluids into and/or sampling fluids from rats. The polyester felt is implanted under the skin; the 22ga tube under the felt mates with 3Fr polyurethane catheters. Miniature external ports in the button permit simple, aseptic access with a mating injector or extension set (for intermittent connections) or a spring tether (for continuous connections). When not accessed the septum in a port will seal, creating a closed system.

NOTE: Success with the VAB™ is critically dependent upon surgical technique. Instech does not perform surgeries or validate surgical procedures; therefore, we can only offer tips here based on customer feedback. These should not be considered complete instructions for use. Always validate new models and surgical techniques with appropriate pilot studies.

## IMPLANTATION

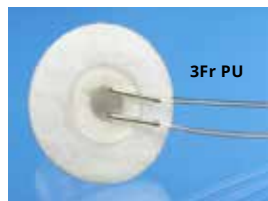
Catheterize desired vessel using aseptic surgical procedures. Exteriorize catheter between the rat's shoulder blades.

Attach the primed catheter(s) to the 22ga connector(s) on a primed button port. A secure connection between the catheter and the VAB™ is critical; it must be able to withstand the forces generated by movement and growth (which could pull off the catheter) and the pressures generated during the study, often by a syringe (which could pop it off). Tips for a secure connection:

- The 22ga connector is designed for 3Fr polyurethane catheters with inner diameters of .024-.025in (.61-.63mm). Other materials, such as silicone or PE, are not recommended.
- Push the catheter as far as possible onto the connector.
- If necessary, further secure the catheter to the button by placing a suture or sleeve around the joint.

During catheterization surgery leave slack in the catheter so that animal growth and movement does not pull the catheter out of its proper position in the vessel or off of the VAB™ connector, or kink the tubing.

Place the surgical felt in a pocket under the skin. Close the skin over the felt but under the flange. Do not suture the button to muscle. The button and catheter should be filled with lock solution of your choice. Expect a tissue reaction that should resolve itself within 5 to 7 days after surgery. Do not connect a tether during this recovery period.



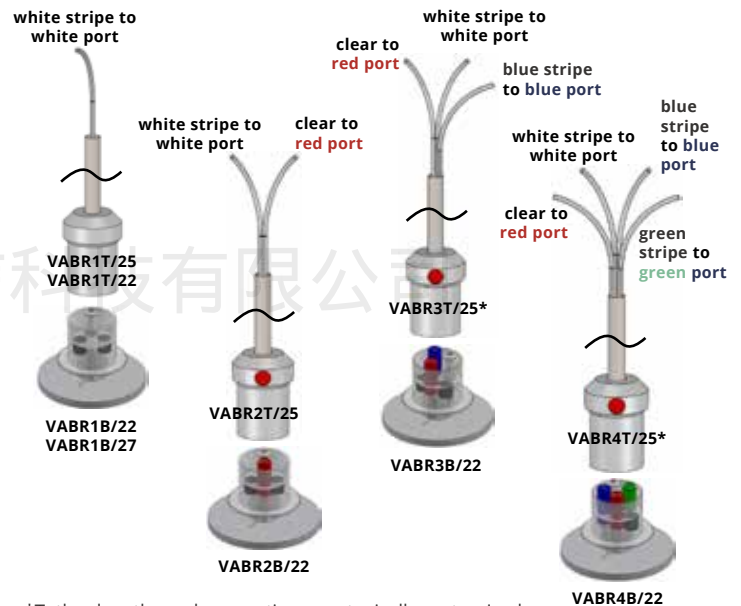
## GROUP HOUSING

Connect the aluminum cap to protect the VAB™ when group housing animals. The cap connects to all models of magnetic rat VABs. Caps may be autoclaved and reused.



## TETHERED ACCESS

Snap in a mating magnetic VAB™ tether for continuous access. With 2, 3 and 4 channel buttons align the red dot with the red port. Use Instech swivels outside the cage to prevent tangling. Mount swivels in counter-balanced lever arms to reduce the forces on the animal and the surgical site and to take up slack in the spring tether.



\*Tether lengths and connections are typically customized.

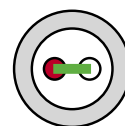
## DIRECT ACCESS

To access the septum directly to flush, deliver an IV bolus, or take a blood sample. Use a PNP3M injector, PNP3MS Sarstedt Capillary Connector Tube or flexible PinPort™ extension set attached to a syringe. Use of any other type of needle will damage the septum. Swab septum with disinfectant prior to accessing it.

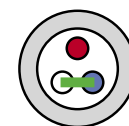


## BILE SAMPLING

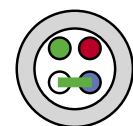
Use a primed VABR2L, VABR3L and VABR4L connector to shunt bile from a catheterized bile duct to the duodenum after surgery. Remove the loop connector and connect a primed mating tether for bile sampling and, optionally, bile salt replacement.



VABR2L



VABR3L



VABR4L