MCLAB
Molecular Cloning Laboratories

Manual

Version 5.0

Product name: MCMag™ NGS Library Clean Up & Size Selection Kit

Cat #: NLP-100, NLP-200, NLP-OEM

Product Description:

The MCMag™ NGS Library Clean Up & Size Selection Kit is a bead-based post-PCR purification and size selection kit without a need for centrifugation or filtration. NGS library size select is enabled by simply adjusting the bead-to-sample ratios. The flexibility of this kit makes it amenable for either manual (e.g. eppendorf tubes) or automated liquid handling instruments on 96- or 384- well plate formats.

NLP-100 Contents

Component	Cat #	Volume
MCMag™ Library Purification Beads	NLP-B5	5 ml
Elution Buffer	NLP-E5	5 ml

NLP-200 Contents

Component	Cat #	Volume
MCMag™ Library Purification Beads	NLP-B5	5 ml x10
Elution Buffer	NLP-E5	5 ml x10

Recommended Storage Condition: 4°C

Procedure:

Important notes before starting:

- Bring beads to room temperature for at least 30 minutes prior to use.
- Ensure the beads are well suspended.
- Pipet the supernatant carefully to minimize contamination.
- Incorrect use of the magnetic stand may lead to sample loss and beads carryover.
- Size cutoff is dependent on bead-to-sample ratios. We suggest starting with a 1.0x ratio and empirically testing down or up within 0.6x to 1.5x range.
- Minimum beads handling volume should be no less than 25 µl.
- Let the supernatant clear before moving on to the next step.
- While drying the beads, allow the plate to remain on the magnetic stand to prevent potential beads loss.
- Utilize freshly prepared 80% ethanol for the washes.
- Do not over dry the bead as it may cause bead loss.

Manual Protocol:

1. Transfer the amplified NGS library sample to a new low-bind 1.5ml eppendorf tube.
2. Add appropriate volume of bead mixture to the sample. Mix by pipetting up and down at least 10 times to generate a homogenous brown mixture.
3. Incubate for 5 minutes at room temperature.
4. Place the tube on the magnetic stand for 5 minutes. Ensure the wall of the tube is physically contacting the magnetic separation stand.
5. Remove the supernatant without disturbing the beads and add 200 µl of freshly prepared 80% ethanol by pipetting on the opposite side of the tube away from the magnet. Incubate with 80% ethanol for no more than 30 seconds.
6. Remove the supernatant with a pipette without disturbing the bead.
7. Repeat step 5 and 6 one more time.
8. Remove any supernatant residual with a fine tip pipetter.
9. Allow the beads to air dry for 5-10 minutes. Do not over dry the beads as this may result in loss of beads.
10. Remove the tube from the rack and add 22.5 µl elution buffer against the wall with beads. Pippette the mixture ten times to completely re-suspend the bead pellet.
11. Incubate for 5 min at room temperature to elute the target.
12. Place the tube back onto the magnetic stand for 2 minutes to separate the beads. Wait for the solution to clear.
13. For long term storage, transfer 20 µl of the supernatant directly to a new low-bind eppendorf tube.