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LiPure™ NGS Library Prep Beads

Cat. #: M0131 Size: 5 ml/20 ml

Introduction

LiPure™ NGS Library Prep Beads are used for nucleic acid size selection in the library construction process for Next Generation Sequencing (NGS). MagSelect Beads are uniform and stable with high binding capacity, and slow sedimentation. MagSelect Beads are suspended in an optimized binding buffer that facilitates the ratio-metric size selection of NGS DNA/RNA library.

Package Information

Component	M0131-05	M0131-20
LiPure™ NGS Library Prep Beads	5 ml	20 ml

Storage

At 2-8°C

Protocol for PCR Clean-up

1. Vortex the LiPure™ NGS Library Prep Beads until they are a homogenous suspension.

2. Add 1.8× (sample volume) of LiPure™ Beads to the sample according to the sample volume shown in Table 1, mix by pipetting up and down 10 times and incubate at RT for 5 min. This step binds DNA fragments 100 bp and larger to the magnetic beads.

Table 1. LiPure™ NGS Library Prep Beads to Sample Volume Chart

Sample Volume (µl)	LiPure™ Beads (µl)
10	18
20	36
50	90

3. Place the plate on the magnetic stand for 2 minutes or until beads pellet. Remove and discard supernatant.

4. Add 200 µl of 80% ethanol to the beads. Re-suspend the beads by pipetting up and down or vortexing for 30 seconds. Replace the plate on the magnetic stand for 2 minutes or until beads pellet. Remove and discard supernatant. Repeat this wash step.

5. Dry the magnetic beads for 5-10 min at RT in the air to remove any remaining ethanol.

6. Add 40 µl of Elution Buffer (such as TE buffer) to the beads. Re-suspend the beads by pipetting up and down 10 times and incubate at RT for 5 minutes. Replace the plate on the magnetic stand for 2 minutes or until beads pellet.

7. Pipette off the supernatant and transfer to a clean plate or tubes.

Protocol for Left Side Size Selection

1. Vortex the magnetic Beads until they are a homogenous suspension.

2. Add the required volume of LiPure™ Beads to the sample according to the desired ratio to the sample shown in Table 2, mix by pipetting up and down 10 times and incubate at RT for 5 min.

Table 2. Bead to Sample Ratio with Fragments

Fragments to be retained	Bead to Sample Ratio
≥ 100 bp	1.8×
≥ 150 bp	1.2×
≥ 200 bp	1.0×
≥ 250 bp	0.9×
≥ 300 bp	0.75×
≥ 500 bp	0.6×

3. Place the plate on the magnetic stand for 2 minutes or until beads pellet. Remove and discard supernatant.

4. With the plate still on the magnetic stand, add 200 µl of 85% ethanol and incubate at RT for 30 seconds. Remove and discard the ethanol supernatant.

5. Dry the magnetic beads for 5-10 min at RT in the air to remove any remaining ethanol.

6. Add 40 µl of Elution Buffer (such as TE buffer) to the beads. Re-suspend the beads by pipetting up and down 10 times and incubate at RT for 5 minutes. Replace the plate on the magnetic stand for 2 minutes or until beads pellet.

7. Pipette off the supernatant and transfer to a clean plate or tubes.

Protocol for Double Size Selection

1. Vortex the LiPure™ Beads until they are a homogenous suspension.

2. (First selection) Add the required volume of LiPure™ Beads to the sample according to the desired fragment range shown in Table 3, mix by pipetting up and down 10 times and incubate at RT for 5 min.

3. Place the tube on the magnetic stand for 2 minutes or until beads pellet. Carefully aspirate the supernatant without disturbing the pellet and transfer the supernatant to a new tube.

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Table 3. Bead to Sample Ratio with Fragments

Fragment range (bp)	200-250	250-300	300-350	350-400	400-450
1st Bead to Sample Ratio	0.9×	0.8×	0.75×	0.7×	0.65×
2nd Bead to Sample Ratio	0.2×	0.2×	0.2×	0.15×	0.15×

4. (Second selection) To the retained supernatant, add the required volume of LiPure™ Beads according to the desired fragment range shown in Table 3, mix by pipetting up and down 10 times and incubate at RT for 5 min.

5. Place the tube on the magnetic stand for 2 minutes or until beads pellet. Remove and discard the supernatant.

6. With the tube still on the magnetic stand, add 200 µl of 85% ethanol and incubate at RT for 30 seconds. Remove and discard the ethanol supernatant.

7. Dry the magnetic beads for 5-10 min at RT in the air to remove any remaining ethanol.

8. Add 40 µl of Elution Buffer (such as TE buffer) to the beads. Re-suspend the beads by pipetting up and down 10 times and incubate at RT for 5 minutes. Replace the plate on the magnetic stand for 2 minutes or until beads pellet.

9. Pipette off the supernatant and transfer to a clean tube.