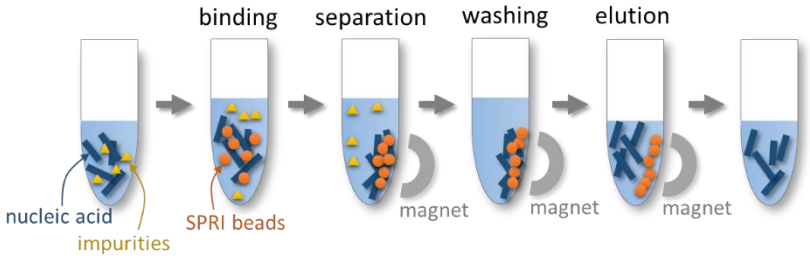
Magnetic Beads (DNA & RNA Purification)

Catalog No.	40051S	40051M	40051L
Volume	5 mL	20 mL	100 mL

Description

Solid Phase Reversible Immobilization (SPRI) beads consist of paramagnetic particles coated with carboxyl groups that reversibly bind DNA. They are used for DNA purification because they are fast, simple and efficient. Our **Magnetic Beads (DNA & RNA Purification)** combines BioDynami's proprietary chemistries with reversible DNA-binding properties of SPRI magnetic beads. The beads are developed for effective nucleic acid purification by removing unwanted components such as salts, dNTPs, enzymes, primers, adapters, and other impurities. The Magnetic beads are RNase free, can be used for applications of DNA, and even work with more sensitive RNA without any additional cost.

Our Magnetic beads are optimized to selectively bind DNA fragments of 100 bp and larger, and RNA fragments of 200 bases and larger. Purified DNA and RNA are suitable for downstream applications requiring high quality DNA and RNA, as the purified fragments are free of contaminants and impurities. The beads can be used for NGS library purification, PCR fragment cleanup, molecular cloning, or even nucleic acid concentration.



The beads can also be used for size selection of DNA fragments ranging from 150 bp to 800 bp by changing the bead-to-sample volume ratio and performing single or double-size selection. The beads are an ideal choice for NGS library preparation. They can be easily integrated into the standard workflow of NGS library preparation since the volume ratio is similar for protocols using Magnetic beads.

Features:

- Effective recovery of DNA and RNA samples
  - DNA fragments greater than 100 base pairs
  - RNA fragments greater than 200 bases
- Removal of unwanted components and impurities
- Fragment size selection for specific applications
  - Consistent single or double-size selection
- Flexibility: compatible with manual and automated processing
- Cost effective alternative to AMPure® XP* with equivalent performance

* AMPure® XP is a trade mark of Beckman Coulter.

Applications:

- NGS Library preparation
- Purification of PCR fragments
- Purification of DNA and RNA fragments
- Molecular Cloning
- Other applications requiring purified DNA and RNA

Component

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Magnetic Beads	5 mL	20 mL	100 mL

Storage Condition

- Store at 4°C, stable up to 12 months.

Reagent & Equipment Needed (not provided in this reagent)

- Magnetic particle concentrator
- 96-well PCR plate or Eppendorf tubes
- 80% ethanol (prepare before use)

Protocol

Note: Bring Magnetic beads to room temperature 30 minutes before use. Vortex or invert the bottle to thoroughly resuspend the beads.

Standard DNA & RNA purification

1) If sample volume is less than 50 µl, increase the volume to 50 µl by adding nuclease-free water. Transfer 90 µl of the resuspended beads to the sample plate or tube. If sample volume is greater than 50 µl, scale the beads volume to 1.8X of the sample volume. Mix by pipetting and incubate for 4 min.
2) Load the sample plate on a magnet, incubate for 5 min, and discard the supernatant carefully.
3) Add 180 µl of 80% ethanol if the samples are in a 96-well plate; add 800 µl of 80% ethanol if the samples are in Eppendorf tubes. Incubate for 30 sec and discard the supernatant carefully. Remove all residual ethanol without disturbing the beads.
4) Air-dry the beads on the magnet for 5 min. DO NOT over-dry intact genomic DNA (as it is hard to resuspend it).
5) Remove the plate (or tube) from the magnet and resuspend the beads in water or Tris-HCl (10 mM).
6) Load the plate on the magnet, incubate for 1 min, and transfer supernatant (containing sample) to a new tube without disturbing the beads.

NGS library purification

1) If library volume is less than 50 µl, increase the volume to 50 µl by adding nuclease-free water. Transfer 50 µl of the resuspended beads to the sample plate or tube. If sample volume is greater than 50 µl, add an equal volume of resuspended beads to the sample. Mix by pipetting and incubate for 3 min.
2) Load the plate on a magnet, incubate for 2 min, and discard the supernatant carefully.
3) Add 180 µl of 80% ethanol, incubate for 30 sec, and discard the supernatant carefully. Remove all residual ethanol without disturbing the beads.
4) Remove the plate from the magnet and resuspend the beads in water or Tris-HCl (10 mM).
5) Load the plate on the magnet, incubate for 1 min, and transfer supernatant (containing library) to a new tube without disturbing the beads.

Quality Control

Magnetic beads components passed stringent functional quality test.

Product Use Limitation

This product is developed and sold for research purposes and *in vitro* use only. Please refer to BioDynami.com for Material Safety Data Sheet of the product.

Limited Label License

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