HighPrep™ DTR

INSTRUCTIONS FOR USE

Catalog Number:
DT-70001, DT-70005, DT-70050, DT-70250, DT-70500

Revision v1.0

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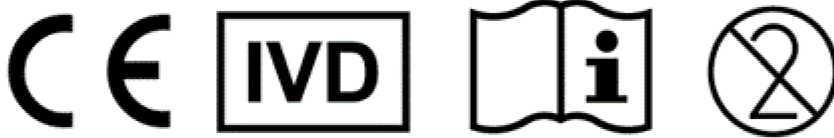
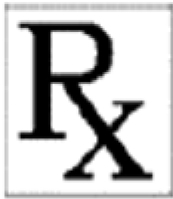
For descriptions of symbols on product labels or product documents, go to **https://www.magbiogenomics.com/.**

The customer is responsible for compliance with regulatory requirements that pertain to their procedures and uses of the kit.





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Product information

Intended use.

HighPrep™ DTR uses a magnetic bead-based chemistry to remove unincorporated terminators and salts from Sanger sequencing reactions. The unincorporated terminators are often referred to as dye blobs, and they interfere with sequence analysis. The kit is intended for robust and efficient amplicon clean-up and to produce pure DNA ready to be used in subsequent applications.

Product information

HighPrep™ DTR (Cat. No. DT-70001, DT-70005, DT-70050, DT-70250, and DT-70500) uses a simple 3 steps procedure: Bind-Wash-Elute. Sanger sequence reaction clean-up process involves a selective binding of DNA to the HighPrep™ DTR particles, followed by the removal of unincorporated dyes, nucleotides, salts, primers, non-targeted amplicons, and other contaminants. DNA amplicons and fragments are selectively bound to the magnetic beads' particles; and highly purified DNA is eluted with low salt elution buffer or water which can be used directly for downstream applications. HighPrep™ DTR is designed for both manual and fully automated purification of sequencing products.

Contents and storage of the Kit

Product Catalog Number	Description	Number of Reactions	Storage Conditions
DT-70005	HighPrep™ DTR - 5 mL	500	2-8°C DO NOT FREEZE
DT-70050	HighPrep™ DTR - 50 mL	5,000	
DT-70250	HighPrep™ DTR - 250 mL	25,000	
DT-70500	HighPrep™ DTR - 500 mL	50,000	

Number of reactions is based on typical 10 µL reaction volume.
10 µL of HighPrep™ DTR is used regardless of the volume of the sequencing reaction.

Required materials not supplied

The following materials are needed but not supplied with the kit:

Item	Source
85% Ethanol (Prepared from non-denatured ethanol)	Any vendor of choice
Elution buffer (0.1mM EDTA or Di H_2O)	Any vendor of choice
Magnetic stand or plate (manual DNA recovery)	www.magbiogenomics.com
Automated platforms for magnetic bead purification (Automated DNA recovery)	Compatible with most platforms but the customer must validate the protocol
96 well cycling plate or 384 well cycling plate or 1.5 mL-2 mL Tubes (for sample processing)	www.nrsbiologics.com or thermofisher.com
Laboratory mixer, vortex, or equivalent	Any laboratory vortex that can mix the beads efficiently
Single and multichannel adjustable pipettors (1.00 µL to1000 µL)	Any accurate pipette that has been Calibrated
Cold block or ice	Any vendor of choice
Sterile aerosol barrier (filtered) pipette tips (DNase and RNase Free)	Any vendor of choice
Polypropylene reservoirs	Any vendor of choice

2 HighPrep™ DTR - 96 Well or 1.5 - 2 mL Tube Format

***Bring HighPrep™ DTR to room temperature for at least 30 mins before use**

1. Shake the HighPrep™ DTR reagent thoroughly to fully resuspend the magnetic beads.

2. Add 10 µL of HighPrep™ DTR reagent to each sample.
   Use 10 µL of HighPrep™ DTR regardless of the volume of the sequencing reaction.

3. Add freshly prepared 85% ethanol volume according to table below:

Reaction Volume (µL)	85% Ethanol (µL) *
5	30
10	40
15	50
20	60

* ***Do not use denatured alcohol. Prepare fresh from absolute ethanol.***

4. Mix well the HighPrep™ DTR reagent and sample by pipetting up and down 7-10 times.

5. Place the sample plate on the 96 magnetic separation device for 4-5 minutes, or until the solution clears. Beads will pull to the side of the well.

6. With the plate on the magnet, remove and discard the supernatant by pipetting.

   Note: Do not disturb the attracted beads while aspirating the supernatant.

7. Keep the sample plate on the magnet and add 100 µL of 85% ethanol to each well. Wait 1-2 minutes, or until the magnetic beads are fully resettled. Mixing is not necessary.

8. With the sample plate still on the magnet, remove and discard the supernatant by pipetting.

9. Repeat steps 7-8 for a total of two 85% ethanol washes.

10. Dry the beads by incubating for 10 minutes at room temperature with the plate still on the magnetic separation device.

    Note: It is critical to completely remove all liquid from each well since it contains traces of excess fluorescent dye and other contaminants.

11. Remove the sample plate from the magnet. Add 40 µL of appropriate elution buffer (0.1mM EDTA or Di H_2O) to each well and pipette up and down 20 times to mix.

12. Incubate at room temperature for 5 minutes.

13. Place the sample plate back on the magnetic separation device and wait 5-7 minutes or until the magnetic beads clear from the solution.

14. Transfer 30-35 µL of the eluate (cleared supernatant) to a new plate to be loaded on a sequencer.

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HighPrep™ DTR – 384 Well or 1.5 - 2 mL Tube Protocol

***Bring HighPrep DTR to room temperature for at least 30 mins before use**

1. Shake the HighPrep™ DTR reagent thoroughly to fully resuspend the magnetic beads.
2. Add 5 µL of HighPrep™ DTR reagent to each sample.
   Use 5 µL of HighPrep™ DTR regardless of the volume of the sequencing reaction.
3. Add freshly prepared 85% ethanol volume according to the table below:

Reaction Volume (µL)	85% Ethanol (µL) *
5	14.3
10	21.4
15	28.6

****Do not use denatured alcohol. Prepare fresh from absolute ethanol.***

4. Mix well the HighPrep™ DTR reagent and sample by pipetting up and down 7-10 times.
5. Place the sample plate on the 384 magnetic separation device for 3-4 minutes, or until the solution clears. Beads will pull to the side of the well.
6. With the sample plate on the magnet, remove and discard the supernatant by pipetting.

   Note: Do not disturb the attracted beads while aspirating the supernatant.
7. Keep the sample plate on the magnet and add 30 µL of 85% ethanol to each well. Wait 1-2 minutes or until the magnetic beads are fully resettled. Mixing not necessary.
8. With the sample plate still on the magnet, remove and discard the supernatant by pipetting.
9. Repeat steps 7-8 for a total of two 85% ethanol washes.
10. Dry the beads by incubating for 10 minutes at room temperature with the plate still on the magnetic separation device.

    Note: It is critical to completely remove all liquid from each well since it contains traces of excess fluorescent dye and other contaminants.
11. Remove the sample plate from the magnet. Add 15-20 µL of appropriate elution buffer (0.1mM EDTA or Di H_2O) to each well and pipette up and down 20 times to mix.
12. Incubate at room temperature for 5 minutes.
13. Place the sample plate back on the magnetic separation device and wait 5-7 minutes or until the magnetic beads clear from the solution.
14. Transfer the eluate (cleared supernatant) to a new plate to be loaded on a sequencer.

Safety and Warning Information

Safety Information
When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate safety data sheets (SDSs). SDS can be downloaded from the "Product Resource" tab when viewing the product kit**.**
Download SDS at www.magbiogenomics.com.

Warning and Precautions

- This kit has not been FDA cleared or approved for diagnostic use in the United States of America.
- Care should be taken to avoid contamination by adequately controlling sample preparation, handling, and processing.
- Dispose of unused kit reagents and human specimens according to local, state, and federal regulations.
- Specimens may be infectious. Follow Universal Precautions when handling specimens.