NEBNext® End Repair Module

NEB #E6050S/L

20/100 reactions

Version 4.0_1/20

Table of Contents

The NEBNext End Repair Module Includes

The volumes provided are sufficient for preparation of up to 20 reactions (NEB #E6050S) and 100 reactions (NEB #E6050L). All reagents should be stored at –20°C.

NEBNext End Repair Enzyme Mix

NEBNext End Repair Reaction Buffer (10X)

The NEBNext End Repair Module is Designed for use with the Following:

NEBNext Quick Ligation Module (NEB #E6056)

NEBNext dA-Tailing Module (NEB #E6053)

NEBNext Q5® Hot Start HiFi PCR Master Mix (NEB #M0543)

NEBNext Singleplex or Multiplex Oligos for Illumina®

Required Materials Not Included

- Thermal cycler
- AMPure® XP Beads (Beckman Coulter, Inc. #A63881) or SPRIselect® Reagent Kit (Beckman Coulter, Inc. #B23317)
- 10 mM Tris-HCl, pH 7.5–8.0 or 0.1 µM Tris-HCl, pH 8.0

Description

The NEBNext End Repair Module has been optimized to convert 1 µg–5 µg of fragmented DNA to blunt-ended DNA having 5′ phosphates, and 3′-hydroxyls. The module is optimized for use with the NEBNext dA-Tailing Module (NEB #E6053), and is part of the original standard DNA library prep workflow for Illumina sequencing.

Each kit component must pass rigorous quality control standards, and for each new lot the entire set of reagents is functionally validated together by construction and sequencing of an indexed library on the Illumina sequencing platform.

For larger volume requirements, customized and bulk packaging is available by purchasing through the OEM/Bulks department at NEB. Please contact OEM@neb.com for further information.

Applications

DNA sample preparation

End repair of 1-5 µg fragmented DNA

Advantages

- Efficient – Converts 1–5 µg fragmented DNA to blunt ended DNA
- Convenient – Reactions are provided in master mix format to reduce steps during DNA sample prep workflows
- Automation Friendly

Protocol

Starting Material: 1–5 µg of DNA Fragmented to 100–1,000 bp in ≤ 85 µl

1. Mix the following components in a sterile microfuge tube:

COMPONENT	VOLUME (µl) PER REACTION
Fragmented DNA	variable
NEBNext End Repair Reaction Buffer (10X)	10 µl
NEBNext End Repair Enzyme Mix	5 µl
Sterile H_20 for a final volume of 100 µl	variable
Total Volume	100 µl

2. Incubate in a thermal cycler for 30 minutes at 20°C with heated lid set to 30°C (or off).
3. Purify DNA Sample using AMPure XP or SPRIselect beads.

   Note: for details how this module is used in the NEBNext Library Prep for Illumina workflow, please see manual for NEBNext DNA library Prep Master Mix Set for Illumina (NEB #E6040).

Kit Components

NEB #E6050S Table of Components

NEB #	PRODUCT	VOLUME
E6051A	NEBNext End Repair Enzyme Mix	0.1 ml
E6052A	NEBNext End Repair Reaction Buffer	0.2 ml

NEB #E6050L Table of Components

NEB #	PRODUCT	VOLUME
E6051AA	NEBNext End Repair Enzyme Mix	0.5 ml
E6052AA	NEBNext End Repair Reaction Buffer	1.0 ml

Revision History

REVISION #	DESCRIPTION	DATE
1.1		3/12
2.0	Create "Kit Component – Table of Components" for small and large size kits. Delete individual component information pages	4/18
3.0	Add "Designed for Use", "Materials not Included". Update the introduction text and the protocol.	2/19
4.0	New format applied.	1/20