NGS Ligation Enzyme

Catalog No.	40105S	40105L
Reactions	24 reactions	96 reactions

Description

The **NGS Ligation Enzyme** was developed for preparation of high-quality libraries for next generation sequencing. The reagent was derived from the ligation step of our NGS library prep kits. The reagent contains Ligation Enzyme and Ligation Buffer with enhancers for high library conversion efficiency.

The proprietary components in the buffer improve ligation of NGS adaptors to dA-tailed DNA fragments dramatically. The ligation is performed at room temperature (20°C) for only 20 minutes with high efficiency. The enzyme is also optimized for use with the BioDynami **End Repair/dA-Tailing Master Mix** (Cat.# 40104S; 40104L).

Features

- Fast: 20 minutes ligation at room temperature
- Simple reaction setup
- Higher library conversion efficiency
- Input DNA amount: From 1 ng to 1 ug

Component

Catalog No.	**40105S**	**40105L**
Ligation Buffer	336 ul	1344 ul
Ligation Enzyme	48 ul	192 ul

Storage Condition

- Store kit at -20°C, stable up to 12 months.

Reagent & Equipment Needed (not provided in this kit)

- Magnetic particle concentrator
- PCR thermal cycler
- 96-well PCR plate
- 80% ethanol (prepare before use)
- Magnetic Beads (BioDynami Cat.# 40051) or equivalent

Protocol

Adaptor Ligation

1) Add the following to one well of a 96-well PCR plate. Slow pipetting of the viscous Ligation Buffer is needed for precise aliquot.

DNA sample	30 ul
Adaptor	4 ul
Ligation Buffer	14 ul
Ligation Enzyme	2 ul
Total	50 ul

2) Mix by pipetting ten times.
3) Incubate at 20°C for 20 min.

Subsequent Magnetic Beads Purification (Recommended)

1) Resuspend Magnetic Beads and transfer 40 ul to the above reaction mixture, 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 ul 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, resuspend the beads in 22 ul of water or Tris-HCl (10 mM).
5) Load the plate on the magnet, incubate for 1 min, and transfer 20 ul supernatant (containing library) to a new tube without disturbing the beads.

Quality Control

Kit 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

The product is developed and sold exclusively for research purposes and *in vitro* use only. The product or its any individual component has not been tested for use in diagnostics or drug development, and is not suitable for administration to human or animal.
The purchaser of this product is granted a limited, non-transferable right to use the purchased amount of the product only for internal, research purposes for the sole benefit of the purchaser. The buyer cannot sell or otherwise transfer (i) this product (ii) its components or (iii) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for commercial purposes. This product is for internal research purposes only and is not for use in commercial purposes of any kind. "Commercial purposes" includes any activity for which a party receives consideration and may include, but is not limited to, (1) use of the product or its components or derivatives in manufacturing, (2) transfer or sale of vectors made with the product or components or derivatives of the product, (3) use of this product or components or derivatives of the product made therefrom to provide a service, information, or data to a third party in return for a fee or other consideration, or (4) resale of the product or its components or derivatives, whether or not such product or its components or derivatives are resold for use in research. If the purchaser is not willing to accept the limitations of this limited use statement, BioDynami is willing to accept return of the products with a full refund. For information on obtaining additional rights, please contact support@biodynami.com

BioDynami

601 Genome Way, Huntsville, Alabama 35806, USA
https://biodynami.com
support@biodynami.com

V1.0 Jan. 2024