Watchmaker Stubby Adapter & UDI Primers Kits

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Product Description

The Watchmaker Stubby Adapter & UDI Primers are compatible with all Watchmaker DNA and RNA library preparation kits and support the construction of NGS libraries from both high- and low-quality samples, including FFPE. These NGS-grade Stubby Adapters and UDI Primers are designed to prepare multiplexed single- and paired-end libraries for use on Illumina® sequencing platforms.

Each Watchmaker Stubby Adapter & UDI Primers Kit consists of adapter volume sufficient for 24 reactions. The Watchmaker Stubby Adapter features a 3' overhanging "T" for ligation to A-tailed DNA fragments and is supplied at a concentration of 15 µM in a single tube. The Watchmaker UDI Primer (Plate 1A) contains 24 unique dual-indexed (UDI) primer pairs with index lengths of 12-nucleotides (nt). Primers are arranged column-wise in a 96-well plate (e.g., in columns 1 – 3) with each well containing 7.5 µL primer at a concentration of 20 µM.

Product Configuration

Stubby Adapter

Tube: Single
Concentration: 15 µM
Volume: 140 µL

UDI Primers

Plate type: Fully-skirted, 96-well plate
Number of UDIs: Set of 24 indexes
Concentration: 20 µM
Volume: 7.5 µL per well

Kit Contents

Kit name	Kit code	Pack size	Component description	Component code	Component concentration	Component volume
Watchmaker Stubby Adapter & UDI Primers (Plate 1A)	P1000320	24 rxn	Watchmaker Stubby Adapter (15 µM)	0092-001	15 µM	140 µL
			Watchmaker UDI Primers (Plate 1A) Set of 24 indexes: 1 – 24	0093-001	20 µM	7.5 µL per well

For larger volumes, higher concentrations, and custom formats, contact the **Sales Team** at sales@watchmakergenomics.com.

Storage and Handling

Watchmaker Stubby Adapters & UDI Primers Kits are shipped on ice packs. Upon receipt, store all components at -20 ± 5°C. Keep them on ice or a cooled reagent block during routine use. When stored and handled as indicated, the product will retain full performance until the expiry date printed on the kit box.

The Watchmaker UDI Primers plate is covered with a pierceable foil seal. It is recommended to pierce the foil seal rather than peeling it off to reduce cross-contamination susceptibility. In the event that not all primers are used at one time, plates should be centrifuged to ensure that all liquid is collected at the bottom of the well before re-sealing with a fresh foil seal to minimise evaporation when stored.

For further details on storage and handling, our Safety Data Sheet (SDS) can be requested from support@watchmakergenomics.com.

Prior to Use

Ensure the Watchmaker UDI Primers plate seal is intact prior to use. Centrifuge the plate to a maximum of 500 × *g* for ~1 min to ensure that all liquid is collected at the bottom of the well before use. It is recommended to pipette mix after centrifuging and prior to using primers; vortexing may contribute to low levels of cross-contamination and is not recommended for this product.

Adapter Ligation

For ligation of the Watchmaker Stubby Adapter to DNA or RNA fragments, use the adapter concentration specified in the appropriate User Guide (Table 1) for the relevant DNA or RNA input amount and workflow. Adapters should be diluted in 10 mM Tris-HCl, pH 8.0, 10 mM NaCl. Do not store the diluted adapter for >24 hours. Each ligation reaction requires 5 µL of adapter at the working concentration.

Dilution volumes can be calculated using the formula: $C_1V_1 = C_2V_2$ (where C_1 = initial concentration, V_1 = initial volume, C_2 = final concentration, V_2 = final volume).

Therefore,

$$V_1 = \frac{C_2 \text{ (obtained from Library Prep User Guide)} \times 5\ \mu L}{15\ \mu M}$$

Table 1: References to Adapter Ligation Step in relevant User Guide

Library Prep User Guide	Sample type	Step	Table
DNA Library Prep Kit for fragmented dsDNA	Fragmented dsDNA	2.4	NA
DNA Library Prep Kit for fragmented dsDNA with TAPS+	Fragmented dsDNA	2.4	NA
DNA Library Prep Kit with Fragmentation	Intact dsDNA	2.2	1
RNA Library Prep Kit	High-quality and partially degraded RNA	A4.3	A3
	FFPE RNA*	B5.3	B2
RNA Library Prep Kit with Polaris® Depletion	High-quality and partially degraded RNA	A7.3	A3
	FFPE RNA*	B8.3	B2
mRNA Library Prep Kit	Intact RNA	7.3	2

*For FFPE, we recommend using stubby adapters rather than full-length adapters. Please contact support@watchmakergenomics.com for more details.

Library Amplification

For amplification of libraries generated with the Watchmaker Stubby Adapter, use 5 µL of Watchmaker UDI Primers per reaction (at a final concentration of 2 µM each in the amplification reaction) using a recommended annealing temperature of 55°C. The number of PCR cycles is dependent on nucleic acid input and is detailed in the User Guides listed in Table 2.

Index Sequences

The 12 nt index sequences for each UDI primer set can be found on the Watchmaker Genomics website at: https://www.watchmakergenomics.com/stubby-indexes.

For further assistance using the Watchmaker Stubby Adapter & UDI Primers Kits, please contact the Scientific Support Team at: support@watchmakergenomics.com.

Table 2: References to Library Amplification Step in relevant User Guide

Library Prep User Guide	Sample type	Step	Table
DNA Library Prep Kit for fragmented dsDNA	Fragmented dsDNA	4.3	2
DNA Library Prep Kit for fragmented dsDNA with TAPS+	Fragmented dsDNA	9.2	2
DNA Library Prep Kit with Fragmentation	Intact dsDNA	4.3	2
RNA Library Prep Kit	High-quality and partially degraded RNA	A7.2	A4
	FFPE RNA*	B8.2	B3
RNA Library Prep Kit with Polaris® Depletion	High-quality and partially degraded RNA	A10.2	A4
	FFPE RNA*	B11.2	B3
mRNA Library Prep Kit	Intact RNA	10.2	3

*For FFPE, we recommend using stubby adapters rather than full-length adapters. Please contact support@watchmakergenomics.com for more details.

Revision History

Version	Description	Date
1.0	• First release	11/2025
1.1	• Correction of index sequence table link	05/2026
	• SDS reference added to Storage and Handling	
	• Table references corrected in Table 1	

WATCHMAKER GENOMICS

For Technical Support, please contact support@watchmakergenomics.com.

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