



Instruction Manual

VATHS RNA Adapters set1/set2 for Illumina[®]

Vazyme Cat #N803

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Catalog

VATHS RNA Adapters set1/set2 for Illumina®	1
Introduction	3
List of Components	3
Storage	4
Applicable Range.....	4
Quality Control	4
Sequences Information	4

Introduction

VATHS RNA Adapters set1/set2 for Illumina® is a specified kit for the high-throughput sequencing platform of Illumina. It is suitable for the construction of Illumina high throughput sequencing platform for multi RNA samples library. Set1 Kit (N803-01) contains Adapter 1-12 RNA, a total of 12 different Index adapters; Set2 Kit (N804-01) contains Adapter 13-27 RNA total 12 different Index adapters. All the reagents provided in the kit are strictly controlled by quality and function, which guarantee the stability and repeatability of the library construction in the maximum degree.

List of Components

Components	N803-01	N803-02
RNA Adapter 1	10 µl	40 µl
RNA Adapter 2	10 µl	40 µl
RNA Adapter 3	10 µl	40 µl
RNA Adapter 4	10 µl	40 µl
RNA Adapter 5	10 µl	40 µl
RNA Adapter 6	10 µl	40 µl
RNA Adapter 7	10 µl	40 µl
RNA Adapter 8	10 µl	40 µl
RNA Adapter 9	10 µl	40 µl
RNA Adapter 10	10 µl	40 µl
RNA Adapter 11	10 µl	40 µl
RNA Adapter 12	10 µl	40 µl

Components	N804-01	N804-02
RNA Adapter 13	10 µl	40 µl
RNA Adapter 14	10 µl	40 µl
RNA Adapter 15	10 µl	40 µl
RNA Adapter 16	10 µl	40 µl
RNA Adapter 18	10 µl	40 µl
RNA Adapter 19	10 µl	40 µl
RNA Adapter 20	10 µl	40 µl
RNA Adapter 21	10 µl	40 µl
RNA Adapter 22	10 µl	40 µl
RNA Adapter 23	10 µl	40 µl
RNA Adapter 25	10 µl	40 µl
RNA Adapter 27	10 µl	40 µl

Note: The use of RNA Adapter was 2.5 µl for a single RNA library.

N803-01 and N804-01 kits for each kind of RNA Adapter packaging is sufficient for 4 RNA library construction, the whole kit is enough for 48 RNA library construction.

N803-02 and N804-02 kits for each kind of RNA Adapter packaging is sufficient for 16 RNA

library construction, the whole kit is enough for 192 RNA library construction.

Storage

Store at -20 °C.

Applicable Range

It is suitable for the construction of Illumina high throughput sequencing platform for multi RNA sample library.

Quality Control

16-hour Incubation: A 50 µl reaction system containing 5 µl of this product and 1 µg HindIII-λDNA, incubated 16 hours at 37 °C result in no bands degraded detected by agarose gel electrophoresis. A 50 µl reaction system containing 5 µl of this product and 1 µg of T3 DNA result in no bands degraded detected by agarose gel electrophoresis.

Endonuclease Activity: A 50 µl reaction system containing 5 µl of this product and 1 µg of φX174 RF I DNA incubated 4h at 37 °C result in less than 10% conversion to RF II detected by agarose gel electrophoresis.

Adapter Concentration Detection: The absorbance value of 260 nm was measured and the difference between the value and the calculated value was less than 10%.

Ligation Efficiency Detection: 1.5 pmol 300 bp DNA fragment with dA-tailings both direction and 2.5 µl of this product were added in the reaction system. Reacted 10 min at 35 °C, the ligation ratio of the two terminal of DNA was more than 90% detected by agarose gel electrophoresis.

Sequences Information

The RNA library structure constructed by VATHS RNA Adapters set1/set2 for Illumina® is as follow:

5' - Universal Adapter - Insert DNA Sequence - RNA Adapter X - 3'

Each of the RNA Adapter provided in this kit contains Universal Adapter, and provides Index sequence tag for the high throughput sequencing to distinguish between different samples. The Adapter RNA sequence is as follows:

Designation	Primer sequences	Index sequence
Universal Adapter	5'-AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCT-3'	
RNA Adapter 1	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>ATCACG</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	ATCACG
RNA Adapter 2	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>CGATGT</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	CGATGT
RNA Adapter 3	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>TAGGCC</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	TTAGGC
RNA Adapter 4	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>TGACCA</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	TGACCA
RNA Adapter 5	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>ACAGTG</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	ACAGTG
RNA Adapter 6	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GCCAAT</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	GCCAAT
RNA Adapter 7	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>CAGATC</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	CAGATC
RNA Adapter 8	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>ACTTGA</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	ACTTGA
RNA Adapter 9	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GATCAG</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	GATCAG
RNA Adapter 10	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>TAGCTT</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	TAGCTT
RNA Adapter 11	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GGCTAC</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	GGCTAC
RNA Adapter 12	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>CTTGTA</u> ATCTCGTATGCCGTCTTCTGCTTG-3'	CTTGTA
RNA Adapter 13	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>AGTCAA</u> CAATCTCGTATGCCGTCTTCTGCTTG-3'	AGTCAA
RNA Adapter 14	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>AGTTCC</u> GTATCTCGTATGCCGTCTTCTGCTTG-3'	AGTTCC
RNA Adapter 15	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>ATGTCA</u> GAATCTCGTATGCCGTCTTCTGCTTG-3'	ATGTCA
RNA Adapter 16	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>CCGTCC</u> CGATCTCGTATGCCGTCTTCTGCTTG-3'	CCGTCC
RNA Adapter 18	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GTCCGC</u> ACATCTCGTATGCCGTCTTCTGCTTG-3'	GTCCGC
RNA Adapter 19	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GTGAAA</u> CGATCTCGTATGCCGTCTTCTGCTTG-3'	GTGAAA
RNA Adapter 20	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GTGGCC</u> TTATCTCGTATGCCGTCTTCTGCTTG-3'	GTGGCC
RNA Adapter 21	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GTTTCG</u> GAATCTCGTATGCCGTCTTCTGCTTG-3'	GTTTCG
RNA Adapter 22	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>CGTACG</u> TAATCTCGTATGCCGTCTTCTGCTTG-3'	CGTACG
RNA Adapter 23	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>GAGTGG</u> ATATCTCGTATGCCGTCTTCTGCTTG-3'	GAGTGG
RNA Adapter 25	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>ACTGAT</u> ATATCTCGTATGCCGTCTTCTGCTTG-3'	ACTGAT
RNA Adapter 27	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC <u>ATTCCT</u> TTATCTCGTATGCCGTCTTCTGCTTG-3'	ATTCCT

Note:

The underlined sequence and the Index sequence of the right column are the Index sequences, and the Index sequence (6 bp) is required to be input in the Sample Sheet before sequencing.