Alithea Genomics

In Collaboration with

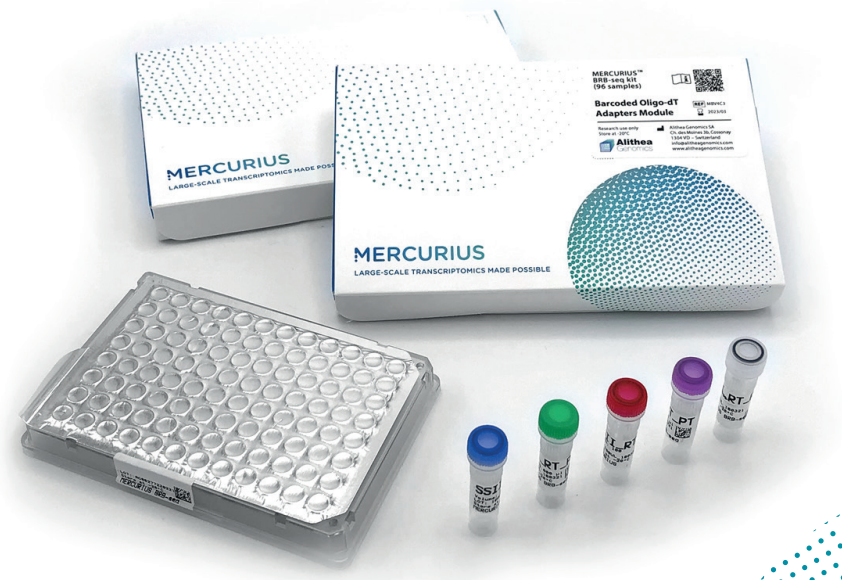
AdipoGen® LIFE SCIENCES

MERCURIUS

High Throughput RNA Sequencing Made Easy

The analysis of gene expression in biological samples is crucial for understanding the cause of complex diseases and the study of potential treatments. But this process has been long, costly and laborious in the past, delaying projects.

Alithea Genomics has launched the MERCURIUS BRB-seq™ kits for high-throughput and cost-efficient RNA-seq library preparation from different types of RNA samples. The kits rely on early sample barcoding followed by pooling, so **hundreds of RNA samples can be processed in the same tube** after the initial reverse transcription reaction. It is compatible with purified RNA, cell lysates and blood RNA samples. MERCURIUS BRB-seq™ kits are useful for drug discovery, RNA sequencing (Transcriptomics) and other research areas and suited for research laboratories in academia or industry (pharma, biotech or agriculture) which are interested in analyzing many samples at once.



MERCURIUS

3' mRNA Sequencing of Bulk RNA Samples

Fast	10x fewer manual steps / High Throughput
Cost-efficient	10x less reagent consumption / Low Cost
Robust	Reduced technical variability by processing 96 samples as one
Accurate	PCR duplicates are removed by using unique molecular identifiers (UMI)
All-in-One	Globin depletion is integrated in the workflow at no extra steps (see Prod. No. ALG-PN10821)

PRODUCT NAME	PID	SAMPLES
NEW MERCURIUS BRB-seq™ Library Preparation Kit (96 samples)	ALG-PN10811-KI01	Purified RNA, Cell Lysate RNA
NEW MERCURIUS Blood BRB-seq™ Library Preparation Kit (96 samples)	ALG-PN10821-KI01	Purified Human Blood RNA

For More Information: **www.adipogen.com/alithea-genomics**

MERCURIUS
BRB-seq™ Technology

Alithea Genomics

Alithea Genomics novel technique called "Bulk RNA Barcoding followed by sequencing" (BRB-seq™) is capable of preparing hundreds of RNA samples for sequencing, all in a single tube, making sequencing projects economically and practically feasible.

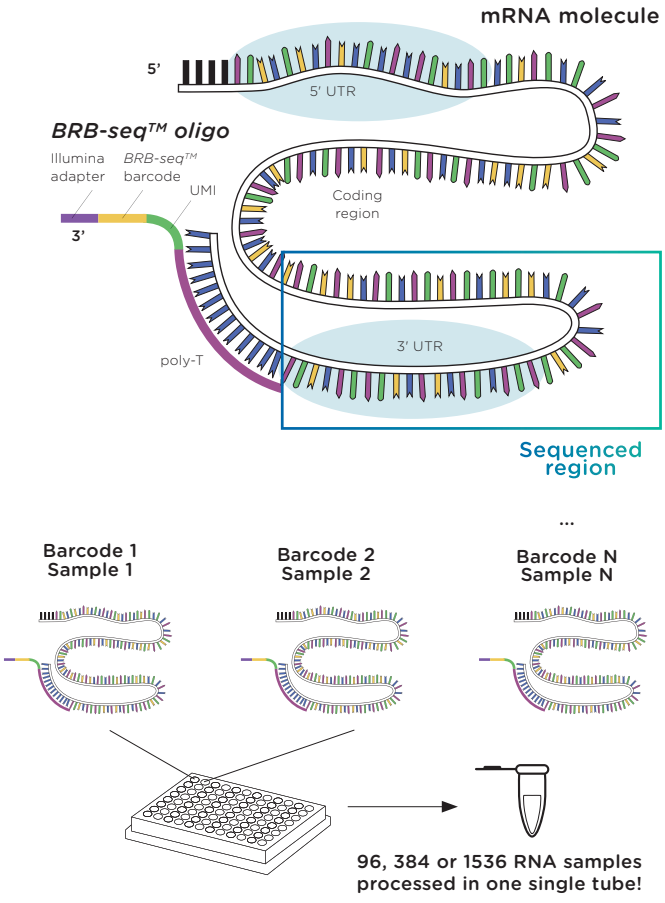
Streamlined preparation of 3' mRNA-seq libraries for hundreds of RNA samples in a single tube

The central aspect of our technology is the use of the BRB-seq™ oligos, which are synthetic DNA oligonucleotides containing:

- a polyT stretch to capture mRNA molecules
- a sample-specific barcode sequence, optimized for minimal cross-reactivity
- a unique molecular identifier (UMI) that enables digital transcript counting and PCR duplicate removal
- an Illumina adapter sequence for streamlined library preparation

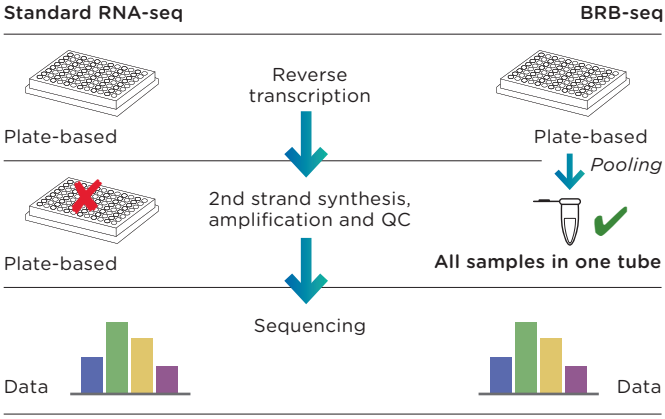
The BRB-seq™ oligos prime the reverse transcription reaction, during which the UMI and the sample-specific barcode are integrated into the synthesized cDNA strand. The use of BRB-seq™ oligos with different barcodes enables molecular "tagging" of individual RNA samples.

After this initial tagging step, all samples can be pooled and processed simultaneously in one single tube for the remainder of the workflow. The use of the MERCURIUS kits drastically reduces costs and manual operations of the downstream steps and, as a consequence, of the overall workflow.



Comparison of Standard RNA-seq and BRB-seq™

Normally, each sample has to be processed individually, following a two to three day protocol to prepare the sample for sequencing analysis. However, by using the MERCURIUS kits, a simple enzymatic reaction to label the RNA is performed. Once that is done, all samples are put into one test tube. From this point, all the remaining processes are performed in one tube in a single day. The MERCURIUS technology will then generate the information for each individual sample from the raw sequencing data. This method dramatically reduces the time and cost of sample preparation for sequencing.



AdipoGen® LIFE SCIENCES

www.adipogen.com

EUROPE/REST OF WORLD
AdipoGen Life Sciences
TEL +41-61-926-60-40
FAX +41-61-926-60-49
info@adipogen.com

NORTH & SOUTH AMERICA
Adipogen Corp.
TEL +1-858-457-8383
FAX +1-858-457-8484
info-us@adipogen.com

For local distributors please visit our website.

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