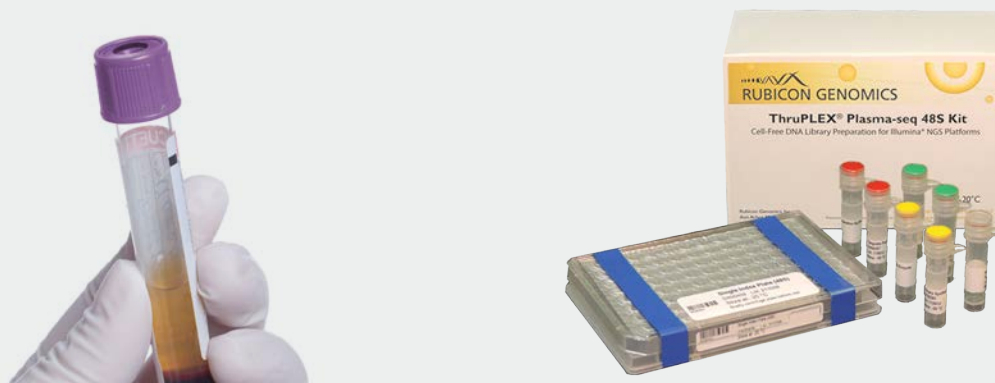


# ThruPLEX® Plasma-seq Kit

ILLUMINA® NGS LIBRARY PREPARATION  
OPTIMIZED FOR CELL-FREE DNA

Beckman Coulter Life Sciences is a North American distributor of ThruPLEX® Plasma-seq. The kit is powered by ThruPLEX chemistry to generate high performance NGS libraries from cell-free DNA isolated from plasma. The chemistry is optimized specifically for cell-free DNA to maximize the library complexity and to preserve the GC representation of the input DNA. ThruPLEX Plasma-seq libraries can be used directly for whole genome sequencing applications or enriched using a custom panel or the leading target enrichment platforms, including Agilent SureSelect® and Roche NimbleGen SeqCap® EZ.

The ThruPLEX Plasma-seq kit can be completed manually or automated using a Biomek liquid handler depending on your laboratory set up and throughput requirements. If you decide to automate, we have demonstrated methods for ThruPLEX Plasma-seq and other Rubicon Genomics reagent kit.



- Designed for cell-free DNA - Newly formulated repair and ligation reagents
- High Performance NGS Libraries - High library diversity at low input amount with broad and reproducible GC coverage
- Adaptable Sample Input Amount - <1 to 30 ng of cell-free DNA
- Fast and Simple Workflow - 3 steps in a single tube or well in 2 hours with no purification or sample transfer steps
- Demonstrated method on Biomek FX<sup>®</sup> Automated Workstation

## Ordering Information

ThruPLEX® Plasma-seq Kit contains everything required to create indexed Illumina NGS libraries including optimized and validated adapters and indexing reagents.

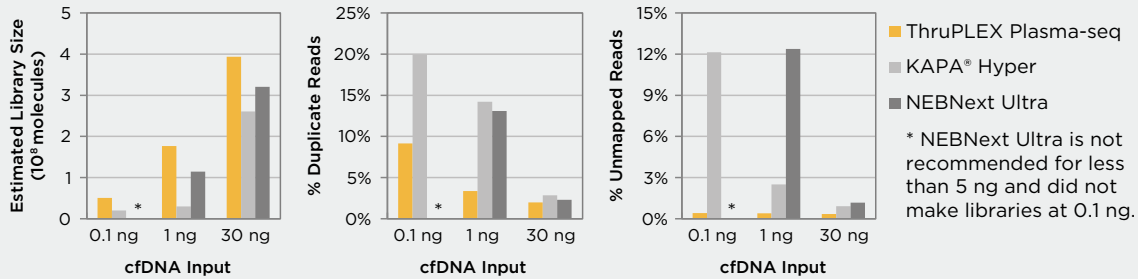
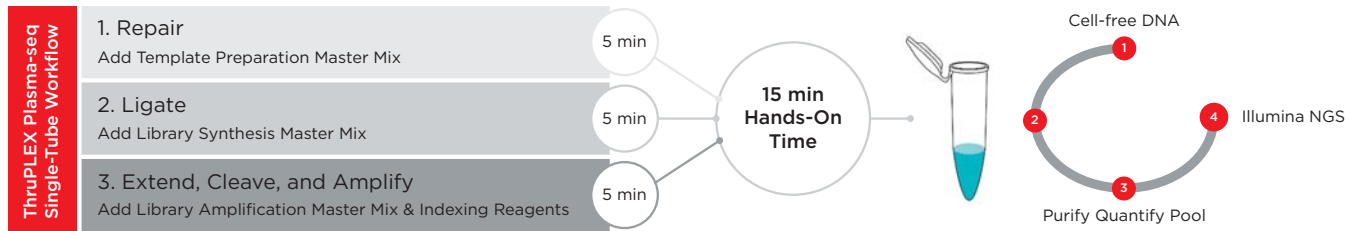
PART NO.	PRODUCT	KIT SIZE	INDEXES INCLUDED
B85326	ThruPLEX Plasma-seq 12S Kit	12 reactions	12 single indexes in tubes
B85327	ThruPLEX Plasma-seq 48S Kit	48 reactions	48 single indexes in a plate
B85328	ThruPLEX Plasma-seq 96D Kit	96 reactions	96 dual indexes in a plate

Contact your Beckman Coulter Life Sciences Genomics sales rep or visit [beckman.com](http://beckman.com) to order a kit or request more information.

"[The] ThruPLEX Plasma-seq kit is the easiest to follow and has the most streamlined protocol (importantly with the fewest clean-up steps). We successfully made libraries from 1 ng input in this trial."

—Dr. Charlie Massie, University of Cambridge

## Most Efficient Workflows

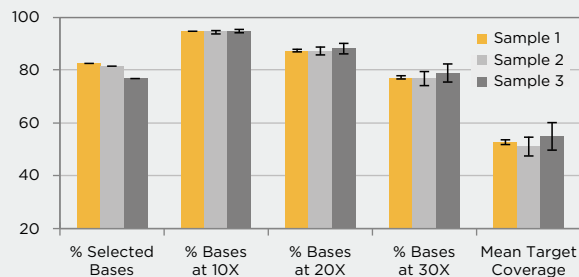
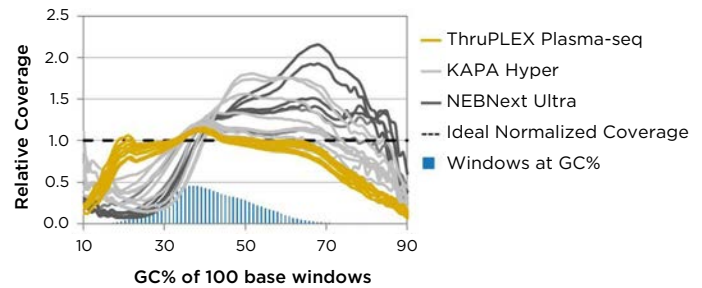


## Highest Diversity and Fewest Unmapped Reads from Cell-Free DNA

ThruPLEX Plasma-seq generated quality libraries with high diversity and a low number of duplicates and unmapped reads. Cell-free DNA was extracted from 3 plasma samples using the QIAamp® Circulating Nucleic Acid Kit, and libraries were prepared at the amounts indicated as measured by Qubit®. The amount of mononucleosomal DNA in each sample, as measured by the Bioanalyzer®, corresponded to 0.09 ng, 0.62 ng, and 15.44 ng. Pooled libraries were sequenced on an Illumina NextSeq® 500 as a paired-end run with 17M to 25M reads per library. Duplication rates were calculated after down-sampling the data to 17 M reads per library.

## Reproducible, Unbiased GC Coverage

ThruPLEX Plasma-seq provided the most reproducible and unbiased GC coverage across the human genome. ThruPLEX libraries showed minimal variability across 9 individual plasma samples tested. Libraries were prepared from cell-free DNA isolated from 1 mL of plasma samples and sequenced on an Illumina NextSeq 500. Four separate plasma samples were used to construct the NEBNext® Ultra™ libraries.



## Outstanding Target Enrichment Performance

ThruPLEX Plasma-seq libraries were captured at high efficiency and generated data with deep coverage of the kinome for mutation detection. Libraries were prepared from 3 plasma samples at input amounts of 5 ng, 6.5 ng, and 10 ng in triplicate, and targeted sequencing was carried out on an Illumina MiSeq® using samples enriched with the ClearSeq® Human DNA Kinome Panel for SureSelectXT2. On average, 5 M reads were generated per library. Selected bases were successfully captured bases that were in or within 250 bp of the baits.

ThruPLEX® Plasma-seq Kit is intended for Research Use Only. It may not be used for any other purposes including, but not limited to, use in diagnostics, forensics, therapeutics, or in humans. ThruPLEX Plasma-seq may not be transferred to third parties, resold, modified for resale or used to manufacture commercial products without prior written approval of Rubicon Genomics, Inc. ThruPLEX Plasma-seq Kit is protected by U.S. Patents 7,803,550; 8,071,312; 8,399,199; 8,728,737 and corresponding foreign patents. Additional patents are pending.



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