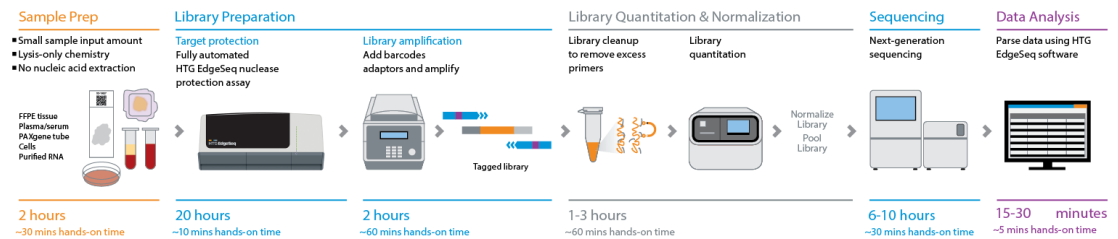


HTG EdgeSeq miRNA Whole Transcriptome Assay

The HTG EdgeSeq miRNA Whole Transcriptome Assay (WTA) is a next generation sequencing (NGS) application that measures the expression of 2,083 human microRNAs (miRNAs) described in the miRBase v20 database. The assay is powered by HTG's proprietary quantitative nuclease protection assay and leverages the high sensitivity and dynamic range of NGS. The HTG EdgeSeq instrument automates the nuclease protection step in the library preparation process, significantly reducing the number of hands-on steps for fast and easy use of NGS platforms for miRNA analysis. The extraction-free, lysis-only chemistry significantly reduces sample input requirements compared to other methods and allows miRNA expression profiling from limited, precious FFPE tissues, serum, plasma, whole blood, and cells. The HTG EdgeSeq miRNA WTA also measures the expression of 13 mRNA housekeeping genes and process controls allowing greater flexibility in data normalization, analysis and interpretation.

Automated on the HTG EdgeSeq system



HTG EdgeSeq miRNA WTA benefits:

- Low sample input:** Use just a single 5 µm FFPE tissue section, 12.5 µL of plasma/serum or 32 µL of PAXgene whole blood to obtain comprehensive molecular profile
- Extraction-free:** Avoid the hands-on time, complexities, costs and losses of sample fidelity normally associated with RNA extraction
- NGS-based:** Leverage the exquisite quantitation capability of NGS platforms to profile 2,083 human miRNAs
- Fewer steps:** HTG EdgeSeq chemistry is fully optimized and requires
 - No RNA Extraction
 - No rRNA Depletion
 - No cDNA Synthesis
 - No End Repair
 - No Size Selection
 - No Adapter Ligation
- Rapid results:** From sample to data in less than two days with about 3 hours of hands-on-time
- Simplified data analysis:** From FASTQ to tabular data in 15-30 minutes

Achieve highly reproducible results from plasma samples

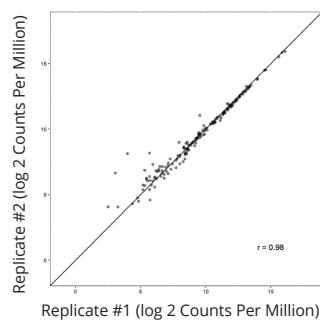


Figure 1. 8 technical replicates of 12.5µl plasma lysates were tested with HTG EdgeSeq miRNA WTA and sequenced on illumina MiSeq. When targeted analysis of 166 miRNAs reported in the literature to be commonly found in plasma and serum (1,2) are assessed, Pearson correlations of >0.95 are routinely obtained between replicates. (single replicate pair comparison represented).

Generate robust data from precious FFPE samples

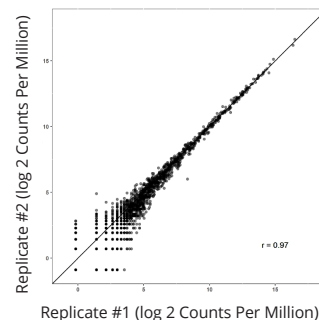


Figure 2. A Single Colon Adenocarcinoma FFPE tissue slide was lysed according to the sample preparation protocol, processed with HTG EdgeSeq miRNA WTA and sequenced on illumina MiSeq. Equivalent expression profiles are demonstrated with a Pearson correlation, r , of 0.97. Data are representative of $n=8$ sample replicates.

HTG EdgeSeq miRNA Whole Transcriptome Assay

HTG EdgeSeq
System

Sample Requirements

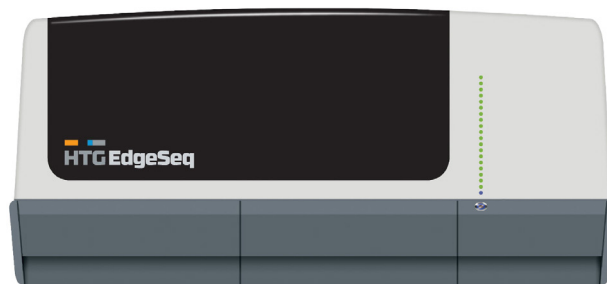
Sample Type	Sample Input
FFPE Tissue	1.56-12.5 mm ² of a 4-5 µm section
Plasma	12.5 µL
Serum	12.5 µL
PAXgene	32 µL
Cell Lines	1,250-5,000 cells
Purified RNA	6.25-25 ng

Product Specifications

miRBase	v20
miRNA Targets	2,083
Housekeeping Genes	
Common	ACTB, B2M, GAPDH, YWHAZ, PPIA
Small RNA (Pol3)	RNU47, RNU75, RNY3, SNORA66
Ribosomal RNA	RPL19, RPS20, RPL27, RSP12

Ordering Information

Catalog #	Product Name	Description
illumina (ILM) Next-Generation Sequencing Systems		
916-001-208	HTG EdgeSeq miRNA WTA ILM (2x8)	2 plates, 8 samples/plate
916-001-008	HTG EdgeSeq miRNA WTA ILM (4x8)	4 plates, 8 samples/plate
916-001-224	HTG EdgeSeq miRNA WTA ILM (1x24)	1 plate, 24 samples/plate
916-001-024	HTG EdgeSeq miRNA WTA ILM (4x24)	4 plates, 24 samples/plate
916-001-096	HTG EdgeSeq miRNA WTA ILM (1x96)	1 plate, 96 samples/plate
Ion Torrent (IT) Next-Generation Sequencing Systems		
916-001-308	HTG EdgeSeq miRNA WTA IT (2x8)	2 plates, 8 samples/plate
916-001-108	HTG EdgeSeq miRNA WTA IT (4x8)	4 plates, 8 samples/plate
916-001-324	HTG EdgeSeq miRNA WTA IT (1x24)	1 plate, 24 samples/plate
916-001-124	HTG EdgeSeq miRNA WTA IT (4x24)	4 plates, 24 samples/plate



HTG Molecular Diagnostics, Inc.
3430 E. Global Loop, Tucson, AZ 85706
Call 877-289-2615
Email info@htgmolecular.com
Website www.htgmolecular.com

For Research Use Only. Not for use in diagnostic procedures.

HTG Edge, HTG EdgeSeq and qNPA are trademarks of HTG Molecular Diagnostics, Inc. Any other trademarks or trade names used herein are the intellectual property of their respective owners.