

# Liquid Biopsy Product Overview

## THE MOST PATIENT-LIKE REFERENCE MATERIALS FOR ctDNA ASSAYS

**Expedite the clinical implementation and standardization of next-generation sequencing (NGS)-based liquid biopsy assays with patient-like ctDNA reference samples featuring broad coverage of clinically relevant genomic alterations and variant types. Trust the industry-leading portfolio of Seraseq® circulating tumor DNA (ctDNA) reference materials to accelerate, validate and standardize the clinical application of targeted NGS-based cell-free DNA assays.**

### Our Patent-pending ctDNA Technology

#### Enables:

- Easy access to the broadest range of clinically relevant oncology biomarkers
- More comprehensive analytical validations compared to using natural cfDNA alone
- Cost-effective testing with highly multiplexed mixes (up to 40 variants in a single reference sample) featuring the broadest selection of variant types - SNVs, INDELS, CNVs, SVs/gene fusions
- Better genomic coverage and improved library complexity (molecular diversity)

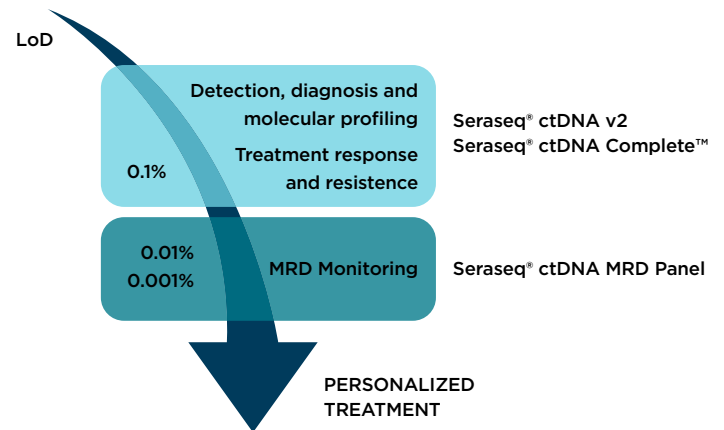


Figure 1: Different applications of Seraseq ctDNA reference materials in clinical cfDNA NGS assays

## COMPREHENSIVE SOLUTION FOR cfDNA NGS ASSAY WORKFLOWS

### Seraseq® ctDNA Reference Materials:

#### Seraseq ctDNA v2

- Pan-cancer ctDNA reference sample with 40 variants (SNVs, INDELS, and SVs) in 28 genes.
- Available in a broad range of VAFs - WT (0%), 0.125%, 0.25%, 0.5%, 1%, 2% - both as purified DNA mix and full process reference material encapsulated in plasma matrix.

#### Seraseq ctDNA Complete

- Solid tumor focused content with coverage of 25 variants (SNVs, CNVs, INDELS and SVs) in 16 genes.
- Available in a broad range of VAFs - WT (0%), 0.1%, 0.5%, 1%, 2.5%, 5% - both as purified DNA mix and full process reference material encapsulated in plasma matrix.

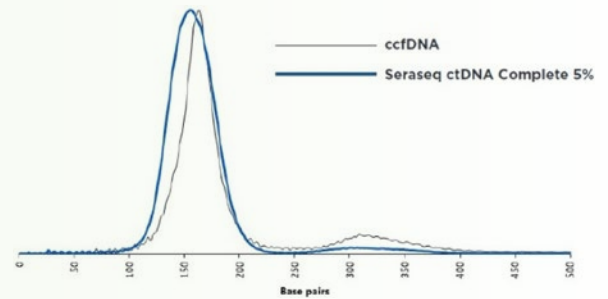
#### Seraseq ctDNA MRD Panel

- Based on a well-characterized cancer cell line, its SNP-matched normal cell line and 22 targetable solid tumor focused DNA variants.
- Enables validation of ultra-high sensitivity MRD assays based on patient-specific disease markers determined from tissue biopsy WES analysis.
- Includes tumor fraction (TF) blends of 0%, 0.5%, 0.05% and 0.005% for assay LoD determinations from a tumor-normal matched reference sample.
- Variant information data available for WES and targeted panel verification of variants at dilution levels.

## Product Highlights:

- Natural cfDNA-like size distribution -170 bp and library performance
- Clinically relevant variants in a well-characterized WT background
- VAFs confirmed by ddPCR and NGS assays.

Figure 2: cfDNA fragment size comparisons. Black line represents natural circulating cell free DNA, and blue line is Seraseq ctDNA Complete Mutation Mix AF5%.



Product	Format	Catalog #	VAF	Conc	Fill Volume	Total Mass
SeraSeq ctDNA v2 Reference Material	FULL-PROCESS, REQUIRES EXTRACTION ctDNA stabilized and blended in a synthetic plasma matrix	0710-0203	2%	25 ng/mL	5 mL	125 ng
		0710-0204	1%	25 ng/mL	5 mL	125 ng
		0710-0205	0.50%	25 ng/mL	5 mL	125 ng
		0710-0206	0.25%	25 ng/mL	5 mL	125 ng
		0710-0207	0.125%	25 ng/mL	5 mL	125 ng
		0710-0208	W T (0%)	25 ng/mL	5 mL	125 ng
SeraSeq ctDNA v2 Mutation Mix	NO EXTRACTION REQUIRED Purified ctDNA in buffer	0710-0139	2%	10 ng/μL	25 μL	250 ng
		0710-0140	1%	10 ng/μL	25 μL	250 ng
		0710-0141	0.50%	10 ng/μL	25 μL	250 ng
		0710-0142	0.25%	10 ng/μL	25 μL	250 ng
		0710-0143	0.125%	10 ng/μL	25 μL	250 ng
0710-0144	W T (0%)	10 ng/μL	25 μL	250 ng		
SeraSeq ctDNA Complete Reference Material	FULL-PROCESS, REQUIRES EXTRACTION ctDNA stabilized and blended in a synthetic plasma matrix	0710-0669	5%	25 ng/mL	5 mL	125 ng
		0710-0670	2.50%	25 ng/mL	5 mL	125 ng
		0710-0671	1%	25 ng/mL	5 mL	125 ng
		0710-0672	0.50%	25 ng/mL	5 mL	125 ng
		0710-0673	0.10%	25 ng/mL	5 mL	125 ng
		0710-0674	W T (0%)	25 ng/mL	5 mL	125 ng
SeraSeq ctDNA Complete Mutation Mix	NO EXTRACTION REQUIRED Purified ctDNA in buffer	0710-0528	5%	10 ng/μL	25 μL	250 ng
		0710-0529	2.50%	10 ng/μL	25 μL	250 ng
		0710-0530	1%	10 ng/μL	25 μL	250 ng
		0710-0531	0.50%	10 ng/μL	25 μL	250 ng
		0710-0532	0.10%	10 ng/μL	25 μL	250 ng
		0710-0533	W T (0%)	10 ng/μL	25 μL	250 ng
SeraSeq ctDNA MRD Panel Mix	Purified ctDNA in buffer	0710-2146	0% TF	10 ng/μL	20 μL	200 ng
			0.5% TF	10 ng/μL	20 μL	200 ng
			0.05% TF	10 ng/μL	20 μL	200 ng
			0.005% TF	10 ng/μL	20 μL	200 ng



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