

# DRAGEN<sup>™</sup> secondary analysis

Efficient secondary analysis of NGS data with award-winning accuracy

DRAGEN secondary analysis allows labs of all sizes and disciplines to maximize their genomic insights with award-winning accuracy,<sup>1,2</sup> a broad menu of applications, and efficient workflows. Get comprehensive coverage with hardware-accelerated genomic analysis algorithms, continuous innovations using machine learning, Multigenome (graph) references, and more.

### Maximize the value of the genome



#### Accurate

Enable a 99.84% accuracy score using Multigenome (Graph) and machine learning with the Precision FDA Truth Challenge V2 benchmark data<sup>1</sup>



#### Comprehensive

Analyze whole genomes, exomes, methylomes, and transcriptomes with a single platform that would take 30 open-source tools to partially replicate<sup>3</sup>



#### **Efficient**

Process an entire human genome at 30× coverage in approximately 25 minutes<sup>2</sup> and reduce FASTQ file sizes up to 5× with DRAGEN ORA compression

# Access DRAGEN software on your platform of choice



#### DRAGEN on-premises

Analyze and store data locally with an on-premises server in a fraction of the time compared with a traditional CPU-based system



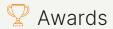
#### DRAGEN onboard

Analyze data directly on the NovaSeq™ X Series, or NextSeq<sup>™</sup> 1000, or NextSeq 2000 Systems without additional computing infrastructure or bioinformatics resources



#### DRAGEN on cloud

Stream data from sequencing systems to BaseSpace™ Sequence Hub or Illumina Connected Analytics for rapid analysis at scale with no hardware investment



Won the Precision FDA Truth Challenge V2 for "Difficult-to-Map" and "All Benchmark" regions, Won "Best Precision" and "Best Overall" on Panel X and "Best Applicability" in the Precision FDA NCTR Indel Calling from OncoPanel.<sup>1,2</sup>

## Product highlights

Application —	On-premises	Onboard		On-cloud	
	DRAGEN server	NovaSeq X Series	NextSeq 1000 NextSeq 2000 Systems	BaseSpace Sequence Hub	Illumina Connected Analytics
BCL conversion	<b>~</b>	<b>~</b>	<b>✓</b>	~	(custom only)
DRAGEN ORA compression	✓	<b>~</b>	✓		
DRAGEN FASTQ + MultiQC	<b>~</b>	<b>~</b>	<b>~</b>	~	~
Whole genome	Germline + somatic	Germline only Somatic coming soon	Germline only	Germline + somatic	Germline + somatic
Enrichment (including exome)	Germline + somatic	Germline + somatic	Germline + somatic	Germline + somatic	Germline + somatic
DNA amplicon	<b>~</b>		<b>~</b>	~	~
RNA	<b>✓</b>	<b>~</b>	~	~	~
Single-cell RNA	<b>~</b>		<b>✓</b>	~	~
Differential expression		~	<b>✓</b>	<b>✓</b>	
NanoString GeoMx NGS			<b>✓</b>	<b>✓</b>	
RNA amplicon	<b>~</b>			<b>✓</b>	Coming soon
Methylation	~	Coming soon		~	~
Metagenomics	<b>✓</b>			<b>✓</b>	
RNA pathogen detection				<b>✓</b>	
COVID	COVIDSeq. COVID Lineage		COVIDSeq. (cloud only)	COVIDSeq. COVID Lineage	
TruSight™ Oncology 500	ctDNA available, solid <i>coming soon</i>			enabled in 3.10	<b>~</b>
ScATAC-Seq	<b>~</b>			~	~
Imputation	<b>~</b>			<b>✓</b>	~
PGx Star Allele Caller	~	Coming soon		~	~
llumina Complete Long Reads				<b>✓</b>	
DRAGEN secondary analysis for RPIP and UPIP	~			<b>✓</b>	~



Learn how customers are using DRAGEN secondary analysis.



Read about DRAGEN secondary analysis in population genomics initiatives on our resource page.



Explore recent DRAGEN publications.

#### Learn more

- 1. Food and Drug Administration. Truth Challenge V2: Calling Variants from Short and Long Reads in Difficult-to-Map Regions. precision.fda.gov/challenges/10. Accessed July 14, 2023.
- Food and Drug Administration. NCTR Indel Calling from Oncopanel Sequencing Data Challenge Phase 1. precision.fda.gov/challenges/21. Accessed July 14, 2023.
- Internal data on file. Ilumina, Inc., 2023



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