

Genome Analyzer_{IIx} Upgrade Kit

Illumina's highly scalable Genome Analyzer system enables rapid whole-genome analysis and offers an unmatched combination of read lengths, number of tags, and paired-end insert size ranges to accelerate your path to discovery and publication.

MOST SCALABLE SYSTEM

The Genome Analyzer_{IIx} system builds on the capabilities of the Genome Analyzer_{II} to provide enhanced ease of use, walk-away automation for reads in excess of 100 bp, and higher throughput. Two key features of the Genome Analyzer_{IIx} are a larger reagent cooler and a new flow cell holder. The larger reagent cooler allows for more than 100 sequencing cycles, further increasing the system's ease of use and automation. The new flow cell holder allows for imaging of 20% more tiles per run, resulting in 20% more high-quality data per run at a lower cost per gigabase.

Leveraging these and other improvements to the system's software and chemistry, the Genome Analyzer_{IIx} is capable of supporting

100+ bp paired-end reads and generating more than 20 Gb of high-quality data per run. Genome Analyzer_{II} users can easily upgrade to the Genome Analyzer_{IIx} by ordering the Genome Analyzer_{IIx} Upgrade Kit.

BROADEST APPLICATIONS RANGE

Powered by Illumina's revolutionary sequencing technology, the Genome Analyzer supports the broadest range of applications including *de novo* sequencing, whole-genome and candidate region sequencing, transcriptome analysis, small RNA discovery, methylation profiling, and protein-nucleic acid interaction analysis. With the simplest and most automated workflow and broadest application flexibility, the Genome Analyzer continues to transform the

way genetic analysis and functional genomics experiments are developed and executed.

GENOME ANALYZER_{IIx} SYSTEM HIGHLIGHTS

- **More Convenient Workflow:** Larger reagent cooler enables walk-away automation for 100+ cycles of sequencing
- **Increased Yield:** Improved manifold and larger prism allow imaging of 20% more tiles per flow cell
- **Unrivaled Output and Data Quality:** Illumina's sequencing technology generates the highest throughput per day and highest output of perfect reads per run

PERFORMANCE PARAMETERS*

READ LENGTH†	RUN TIME (DAYS)	NUMBER OF READS (PER FLOW CELL)	HIGH-QUALITY OUTPUT (GB)‡	HIGH-QUALITY OUTPUT (GB PER DAY)‡	% BASE CALLS WITH Q ≥ 30 (GB)	PER BASE READ ACCURACY
2 × 35 bp	~ 5	96–120 million	5–7	~1–1.5	70–85%	> 99%
2 × 50 bp	~ 6.5	96–120 million	9.5–12	~1.5–1.8	70–85%	> 99%
2 × 75 bp	~ 9.5	96–120 million	14–18	~1.5–1.9	> 70%	> 98.5%

SAMPLES

Throughput: eight channels per flow cell, up to 12 samples per channel

Input requirement: 0.1–1.0 µg (single and paired-end reads), 10 µg (Mate Pair reads)

Genomic DNA sample prep: 3 hours hands-on, 6 hours total for single or paired-end libraries

Flow cell: Genome Analyzer_{IIx} uses 1.4 mm channel flow cell

SERVICE AND SUPPORT

Illumina will ensure that your Genome Analyzer system is properly installed and qualified, and will provide ongoing maintenance and service. This industry-leading support is available in North America, Europe, and Asia.

* Sequencing output generated at cluster densities between 100,000 and 125,000 per tile that pass filters, SBS v3 kits and Sequencing Control Software (SCS) 2.3. Analysis performed with IPAR 1.3 and Pipeline software v1.3.

† 2 × 50 bp reads supported, 2 × 75 bp reads enabled.

‡ Data generated from clusters that pass Pipeline software v1.3 quality filters.

ORDERING INFORMATION

PRODUCT	CATALOG NO.
Genome Analyzer _{ix} Upgrade Kit	SY-301-1204-PRE

ADDITIONAL INFORMATION

Contact Illumina for more information on the Genome Analyzer_{ix} system.

Illumina, Inc.
Customer Solutions
1.800.809.4566 (toll free)
1.858.202.4566 (outside the U.S.)
techsupport@illumina.com
www.illumina.com

FOR RESEARCH USE ONLY

© 2009 Illumina, Inc. All rights reserved.
Illumina, Solexa, Making Sense Out of Life, Oligator, Sentrix, GoldenGate, DASL, BeadArray, Array of Arrays, Infinium, BeadXpress, VeraCode, IntelliHyb, iSelect, CSPRO, and GenomeStudio are registered trademarks or trademarks of Illumina, Inc. All other brands and names contained herein are the property of their respective owners.
Pub. No. 770-2009-006 Current as of 3 February, 2009

