BaseSpace™ Sequence Hub Apps Quick Guide

Get a variety of low-cost data analysis apps with BaseSpace Sequence Hub services. All services and DRAGEN™ apps are priced in iCredits. Learn more.

Quick links

Click on any of the application areas below to quickly view each section.

Biomedical and Basic Research – Genetic Analysis

App name	Sequencing application(s)	Key functionality	Vendor
DRAGEN Enrichment Demo Data Link	• Whole-exome sequencing • Targeted Resequencing	• Alignment • Small Variant Calling • Somatic Variant Calling • SV/CNV Calling • Custom Manifest Files	**Illumina, Inc.** Compute Cost: 2 iCredits per node/hr License Cost: n/a Example Compute Cost: FASTQ to SNVs only 88M reads, 2 x 150 bp Analysis cost = 2.50 iCredits/sample
DRAGEN Germline Demo Data Link	• Whole-genome sequencing • Whole-exome sequencing	• Alignment • Small variant calling • CNV calling • Somatic variant calling	**Illumina, Inc.** Compute cost: 7 iCredits per node/hr License cost: n/a Example compute cost: FASTQ to SNVs only 88M reads, 2 x 150 bp Analysis cost = 2.50 iCredits/sample
DRAGEN Joint Genotyping Pipeline Demo Data Link	• *De novo* variant calling	• Novel variant identification	**Illumina, Inc.** Compute cost: 5 iCredits per node/hr License cost: n/a Example compute cost: Input: Trio of gVCFs processed with DRAGEN Germline Analysis cost = 1 iCredits/sample

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Biomedical and Basic Research – Genetic Analysis (continued)

App name	Sequencing application(s)	Key functionality	Vendor
DRAGEN Somatic Pipeline Demo Data Link	• Whole-genome sequencing • Whole-exome sequencing	• Alignment • Somatic variant calling • Tumor-normal and tumor-only analysis	**Illumina, Inc.** Compute cost: 5 iCredits per node/hr License cost: n/a Example compute cost: 4,750M reads, 2 x 150 bp Analysis cost = 13 iCredits/sample
BWA Aligner Demo Data Link	• Whole-genome sequencing • Targeted sequencing	• Alignment • Custom reference genome • Batch processing	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 0.72M reads, 2 x 150 bp Analysis cost = 2 iCredits/sample
DNA Amplicon Demo Data Link 1 Demo Data Link 2	• Targeted resequencing (AmpliSeq™ for Illumina)	• Alignment • Small variant calling • Annotation	**Illumina, Inc.** Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: -0.72M reads, 2 x 150 bp Analysis cost = 2 iCredits/sample
EDGC Annotator	• Targeted Resequencing	• Variant Annotation • Variant Analysis	**EONE-DIAGNOMICS Genome Center** www.edgc.com/edgcannotator?lang=en Compute Cost: 3 iCredits per node/hr License Cost: n/a
OncoCNV Trainer Demo Data Link	• Targeted resequencing (AmpliSeq™ for Illumina)	• CNV calling	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 18M reads, 2 x 150 bp Analysis cost = 1 iCredits/sample
OncoCNV Caller Demo Data Link	• Targeted resequencing (AmpliSeq™ for Illumina)	• CNV calling	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 18M reads, 2 x 150 bp Analysis cost = 1.5 iCredits/sample

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Biomedical and Basic Research – Genetic Analysis (continued)

App name	Sequencing application(s)	Key functionality	Vendor
Pindel Demo Data Link	• Targeted resequencing (AmpliSeq™ for Illumina)	• Insertion and deletion breakpoint detection	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 4.1M reads, 2 x 150 bp Analysis cost = 1 iCredits/sample
Pisces Variant Caller Demo Data Link	• Targeted resequencing	• Low-frequency somatic variant detection	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 7M reads, 2 x 150 bp Analysis cost = 3 iCredits/sample
TruSeq® Amplicon Demo Data Link	• Targeted resequencing	• Alignment • Small variant calling • Somatic variant calling • Annotation • Custom manifest files • Batch processing	**Illumina, Inc.** Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: TruSight Myeloid Panel (5000x mean coverage) 2.35M reads, 2 x 150 bp Analysis cost = 0.78 iCredits/sample
TruSight Tumor 15 Demo Data Link	• Targeted resequencing (TruSight Tumor 15 Panel)	• Alignment • Variant calling	**Illumina, Inc.** Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: TruSight Tumor 15 Panel (5000x mean coverage) 733K reads, 2 x 150 bp Analysis cost = 0.35 iCredits/sample
TruSight Tumor 170	• Targeted resequencing (TruSight Tumor 170 Panel)	• Variant calling • SV/CNV calling • RNA fusion calling	**Illumina, Inc.** Compute cost: Free License cost: n/a
UMI Error Correction Demo Data Link Demo Data Link	• Targeted resequencing (TruSight® Tumor 170)	• Reduce PCR or sequencing errors for rare and low-frequency somatic variants	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 83M reads, 2 x 125 bp Analysis cost = 2.15 iCredits/sample

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Data Handling, Data Quality Control (QC), and Data Visualization

App name	Sequencing application(s)	Key functionality	Vendor
FASTQ Toolkit	• FASTQ manipulation	• Sub-sampling • Adapter trimming • Base trimming • Quality trimming • Read filtering	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
FASTQC Demo Data Link	• Data QC	• Base QC profile	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
Integrative Genomics Viewer	• Whole-genome sequencing • Targeted resequencing • ChIP-Seq • RNA-Seq	• Genome browser • Visualizations	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: Free License cost: n/a
SRA Import	• Data import • General NGS	• Imports NGS data from NCBI Sequence Read Archive to BaseSpace Sequence Hub using SRA accession number	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
SRA Submission	• Data export • General NGS	• Submission of data to NCBI SRA	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
Variant Calling Assessment Tool Demo Data Link	• Data QC	• Comparison of variant call sets • SNV and Indel statistics	**BaseSpace Labs** basespacelabs@illumina.com Compute Cost: 3 iCredits per node/hr License Cost: n/a

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Gene Expression and Regulation

App name	Sequencing application(s)	Key functionality	Vendor
DRAGEN Methylation Pipeline Demo Data Link Demo Data Link	• Bisulfite sequencing	• Alignment • Methylation calling	**Illumina, Inc.** Compute cost: 5 iCredits per node/hr License cost: n/a Example compute cost: Targeted methylation 138M reads, 2 x 150 bp Analysis cost = 7.50 iCredits/sample Whole-genome 1,532M reads, 2 x 150 bp Analysis cost = 16.1 iCredits/sample
DRAGEN Reference Builder Demo Data Link	• Custom genome support	• Custom reference support	**Illumina, Inc.** Compute cost: 5 iCredits per node/hr License cost: n/a
DRAGEN RNA Pipeline Demo Data Link	• Whole-transcriptome gene expression • Gene fusion detection	• Alignment • Fusion detection • Gene expression	**Illumina, Inc.** Compute cost: 5 iCredits per node/hr License cost: n/a Example compute cost: 2.6M reads, 2 x 75 bp Analysis cost = 0.5 iCredits/sample
ChIPSeq Demo Data Link	• DNA-Protein Interactions • ChIPSeq	• Uses MACS for peak identificatoin and HOMER for motif discovery	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
MethylKit Demo Data Link	• Methylation profiling • Whole-genome sequencing • Targeted sequencing	• Analyze WGBS and targeted bisulfite sequencing data	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
miRNAs Analysis Demo Data Link	• Small RNA sequencing • miRNA profiling	• Alignment • Differential expression	**B&Gu @ University of Torino** mirnasanalysisbasespaceapp.blogspot.it Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 5M reads, 1 x 50 bp Analysis cost = 0.78 iCredits/sample

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Gene Expression and Regulation (continued)

App name	Sequencing application(s)	Key functionality	Vendor
RNA Amplicon Demo Data Link	• Targeted gene expression (AmpliSeq™ for Illumina)	• Alignment • Gene counts • Fusion detection	**Illumina, Inc.** Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 2.56M reads, 2 x 150 bp Analysis cost = 1.50 iCredits/sample
RNA-Seq Alignment Demo Data Link Demo Data Link Demo Data Link	• Transcriptome mining • Gene expression	• Alignment (STAR or TopHat) • Gene counts • Transcripts counts • Annotation • Variant calling • Fusion detection • Novel transcript assembly • Batch processing	**Illumina, Inc.** 1.8 License cost: n/a Example compute cost: mRNA: 25M reads, 2 x 75 bp Analysis cost = 6.02 iCredits/sample totalRNA: 50M reads, 2 x 75 bp Analysis cost = 12.04 iCredits/sample
RNA-Seq Differential Expression Demo Data Link	• Transcriptome mining • Gene expression	• Assembly of novel transcripts • Differential expression	**Illumina, Inc.** Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: mRNA: 25M reads, 2 x 75 bp Analysis cost = 37.64 iCredits/sample totalRNA: 50M reads, 2 x 75 bp Analysis cost = 75.3 iCredits/sample
Small RNA Demo Data Link	• Small RNA sequencing • miRNA profiling	• Alignment • Classification of miRNAs, isomiRs, and piRNAs • Novel miRNA & pre-miRNA discovery • Differential expression • Batch processing	**Illumina, Inc.** Compute cost: 3 iCredits per node/hr License cost: n/a

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Microbial Genomics and Metagenomics

App name	Sequencing application(s)	Key functionality	Vendor
16S Metagenomics Demo Data Link	• 16S rRNA microbial communities profiling	• Taxonomic classification of microbial communities • Batch processing • Support for custom databases	**Illumina, Inc.** Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 100K reads, 2 x 300 bp Analysis cost = 1.28 iCredits/sample
E. coli Serotyping Demo Data Link	• E. coli serotype identification	• Serotype identification	**GoSeqIt** Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: Input: FASTA of E. coli reads Analysis cost = 1 iCredits/sample
IgReC Demo Data Link	• Targeted sequencing • RNA-Seq • Immunology	• Reconsts full-length adaptive immune repertoires from Rep-Seq data • Alignment	**Center for Algorithmic Biotech.** yana-safonova.github.io/ig_repertoire_constructor igtools_support@googlegroups.com Compute cost: 3 iCredits per node/hr License cost: n/a
ITS Metagenomics Demo Data Link	• Fungal rRNA microbial communities profiling	• Taxonomic classification of microbial communities	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 2.1M reads, 2 x 150 bp Analysis cost = 2 iCredits/sample
Kraken Metagenomics Demo Data Link	• Shotgun metagenomics	• Host DNA removal • Taxonomic classification	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 4M reads, 2 x 300 bp Analysis cost = 1.16 iCredits/sample 40M reads, 2 x 300 bp Analysis cost = 11.16 iCredits/sample
MetaPhlAn Demo Data Link	• Metagenomics	• Phylogenetic analysis	**The Huttenhower Lab** huttenhower.sph.harvard edu/metaphlan Compute cost: 3 iCredits per node/hr License cost: n/a

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Microbial Genomics and Metagenomics (continued)

App name	Sequencing application(s)	Key functionality	Vendor
MiXCR Immune Repertoire Analyzer Demo Data Link	• Targeted requencing • RNA-Seq • Immunology	• Alignment • Visualization	**MILaboratory** milaboratory.com support@milaboratory.com Compute cost: 3 iCredits per node/hr License cost: 10 iCredits/sample
Prokka Genome Annotation Demo Data Link	• Microbial	• Prokaryotic genome annotation	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
Rescaf	• Microbial	• Improves quality of scaffold sequences	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a
SPAdes Genome Assembler Demo Data Link	• Microbial	• De novo assembly	**Algorithmic Biology Lab** cab.spbu.ru/spades Compute cost: 3 iCredits per node/hr License cost: n/a Example compute cost: 5MB genome with 100x coverage 833K reads, 2 x 300 bp Analysis cost = 7.30 iCredits/sample
SRST2 Demo Data Link Demo Data Link	• Microbial ID	• MLST typing	**BaseSpace Labs** basespacelabs@illumina.com Compute cost: 3 iCredits per node/hr License cost: n/a