eurofins | Genomics

NEXT GENERATION SEQUENCING

High Throughput Sequencing Powered By Innovation & Expertise.

Illumina HiSeq 2500 / MiSeq

Roche 454 GS FLX++ / GS Junior+

Amplicons & Exomes

Pac Bio RS II

Re-sequencing

Transcriptomes

Ion Proton

NGS Favourites – Online Ordering

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Next Generation Sequencing – Innovation & Expertise.

In December 2006 Eurofins Genomics became the first Service provider in Europe to offer NGS services using the Roche 454 GS20. Since then, Eurofins has extended this portfolio by using various leading NGS sequencing technologies.

- Illumina HiSeq 2500 / MiSeq for ultra-deep sequencing with huge data output
- PacBio RS II for de novo sequencing with extra-long read lengths
- Roche GS FLX++ and GS Junior+ for excellent amplicon data and Sanger-like reads
- Life Technologies' Ion Proton for small projects and short turnaround times especially in exome sequencing

Our portfolio enables us to tailor to your specific project needs, as shown by the following examples:

Differentiating identical twins

A combination of Illumina HiSeq sequencing, latest bioinformatic analysis approaches, and Sanger sequencing for SNP confirmation revealed that it is possible to differentiate between identical twins. This technique can now be used for forensic DNA fingerprinting in criminal cases or paternity testing.

De novo genome sequencing of the Ash Tree

Using a hybrid sequencing approach with long shotgun reads (Roche GS FLX++) and long jumping distance libraries (3, 8, 20, 40 kbp) sequenced with the Illumina HiSeq 2000/2500 led to excellent scaffolding and assembly results.

NGS Favourites – Convenient Online Ordering.

"I am a consistent user of the next generation sequencing (NGS) services of Eurofins Genomics, working with email quotations to place my orders. Using the NGS online shop for ordering a new project is not only incredibly easy, but also really fast. I can now price and order a complete NGS service in only 10 minutes instead of waiting for a quote. I will continue to use Eurofins next generation sequencing services, because I appreciate their experience and professionalism."

Years of experience with next generation sequencing has inspired us to create standard packages for a variety of next generation sequencing applications. Our NGS Favourites are excellent value for common NGS applications that evolved from custom projects.

Advantages:

- Highest quality - the NGS Favourites are based on our superior in-house techniques which ensure premium data quality
- Economic prices - expertise combined with excellent prices
- Straightforward solutions - save time and effort by choosing a best practise approach that includes all steps to successfully finalise your project

You can directly order our NGS Favourites online where you are free to select the number of samples, bioinformatics and additional services.

Applications.

Genome Sequencing

Obtain high quality genome de novo assemblies by sequencing a combination of shotgun libraries and long jumping distance (LJD) libraries. LJD libraries are available in various sizes from 3 kbp to 40 kbp jumping distance.

Are you interested in genome re-sequencing to identify genetic variations?

Due to the high data output Illumina sequencing with one or more shotgun libraries would be the preferred solution.

RAD-Sequencing

Identify and score genetic variation in any species quickly and reliably. RAD-seq is well suited for genetically complex organisms with or without available reference genome.

Gap Closing

Finish your genome by using a sophisticated combination of NGS, Sanger sequencing and the newest bioinformatic tools.

Re-sequencing with Sequence Capture

Concentrate on particular exome parts by using state-of-the-art exome designs such as:

- Agilent / NimbleGen exome - capture and subsequent sequencing on the Illumina HiSeq 2500
- Ion AmpliSeq exome capture and subsequent sequencing on Ion Proton

Design your own sequence capture layout and benefit with the NimbleGen SeqCap protocol from an easy-to-scale workflow that can simultaneously analyse up to 940 samples.

Transcriptome Sequencing

Choose from a set of libraries depending on your project:

- Normalised, random-primed cDNA libraries for high-quality de novo transcriptomes
- 3'-fragment libraries for highest resolution of expression profiling studies
- Various other libraries like mRNA-seq, stranded mRNA-seq, 5'-fragment libraries
- Short insert cDNA library for small RNA-seq

Amplicon Sequencing

Analyse phylogenetic diversity in any population or study rare mutations by ultra deep sequencing of PCR products. Eurofins Genomics offers sequencing of PCR products with the following technologies:

- Illumina MiSeq – up to 50 million reads with a read length up to 300 bp
- Roche 454 – variable read-length up to 1000 bp

Bioinformatics

We also offer a comprehensive data analysis, if desired. Our bioinformatics team is able to assemble any size of genome; perform mappings or detailed BLAST analysis. Using the latest tools and software, our experts output your data in an optimum format that can be directly used for further analysis or scientific publications. Order your project with our bioinformatics and get more than just standard results.

	APPLICATION	HISEQ 2500	MISEQ	PACBIO RS II	GS FLX++	GS JUNIOR+	ION PROTON
GENOME SEQ	De novo sequencing of bacterial & fungal genomes	✓✓	✓✓✓	✓✓	✓✓✓		
	De novo sequencing of higher eukaryotic genomes	✓✓✓		✓	✓		
	Resequencing of genomes	✓✓✓	✓✓✓				
TRANSCRIPTOME SEQ	De novo transcriptome sequencing	✓✓	✓✓✓		✓✓✓		✓
	Expression profiling	✓✓✓	✓				
EXOME & AMPLICONS	Ultra deep amplicon sequencing	✓	✓✓✓		✓✓✓	✓✓✓	✓✓
	Exome sequencing	✓✓✓	✓✓				✓✓

Our ratings are based on factors such as data output, read length, turnaround time, data quality and cost efficiency.

Why Choose Eurofins Genomics For Your Upcoming NGS Project?

Founded in 1990, Eurofins Genomics is part of the Eurofins Scientific Group with laboratories across 36 countries with more than 16,000 employees.

Global Network

Eurofins Genomics has a strong global presence enforced by its 600 highly skilled employees, production facilities and service centres based in Europe, USA, Japan and India.

Customers & Markets

Eurofins Genomics supplies thousands of customers in various different markets. Our services are tailored for **pharma, diagnostics, agriculture, food, biotechnology and research applications** worldwide.

Combined Expertise

Eurofins Genomics' European site in Germany uses state-of-the-art technology from all areas related to DNA applications, testing, analysis and research.

Quality Management

Our QM/QA-System is ISO 9001 and ISO 13485 (medical devices requirements) certified. As a DNA-testing laboratory we are ISO 17025 accredited, and offer also testing services that are compliant to the principles of Good Laboratory Practice (GLP) and Good Clinical Practice (GCP).

Service Offerings

We offer a wide-range of genomic services based on the core business lines:

- DNA & RNA Oligonucleotides
- Genotyping & Gene Expression
- Custom DNA Sequencing
- Gene Synthesis & Molecular Biology
- Next Generation Sequencing

Confidentiality

Strict confidentiality is guaranteed with every project we complete. The excellence of our service is overseen by a quality management procedure.

Superior Sample Preparation

Our applied genetics division is renowned for its vast range of DNA preparation products, from food, animals and forensic samples. If you work with bespoke samples, we have the expertise to help you achieve optimum results.

Service Is More Than Just A Word For Us.

Our mission is to deliver first class products together with professional, fast and competent customer support whenever you need it. Find your customer service contact number according to your country below:

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+49 8092 8289-77

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Toll free phone numbers in Europe:

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Denmark	8088 1262	Norway	800 138 44
Finland	0800 112 744	Sweden	020 798 148
France	0800 903 807	Switzerland	0800 562 013
Ireland	1800 555 056	UK	0800 0323 135
Italy	800 785 950		

Feel free to contact us via email and a member of our customer support team will be happy to assist you. To contact **Eurofins Genomics' headquarters** in **USA**, **Japan**, **India** or to locate a **distributor in your area**, please have a look on our website: **eurofinsgenomics.com**

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