

## Genomics

# GENOTYPING AND GENE EXPRESSION SOLUTIONS

**Microsatellites** 

## From Single Service Modules To Fully Integrated Projects.

## SNPS DNA Extraction Marker Discovery Expression Analysis DA Expression Analysis DELS Transcriptome Analysis Sequencing based Genotyping Residual DNA Testing Illumina Affymetrix Fluidigm Cell Line Authenticity DNA Quantification

eurofinsgenomics.com

### Genotyping Services – Innovation & Expertise.



Benefit from our unique technological portfolio, our experience in applied genetic testing and our global laboratory network! Discover our large selection of state-of-the-art service platforms. Combine our services according to your needs and applications.

## De-Novo DNA marker discovery by Next Generation Sequencing

We can help you find new SNPs for all species from virus to plant, with or without a reference sequence. Ask us for the best solution to reduce your genome of interest complexity!

## Genome-wide SNP Genotyping by Next Generation Sequencing

Various technologies are available to genotype species where no genome sequence is available. Discuss your needs with us. We will find a solution.

#### Genome-wide SNP Genotyping by Microarrays

As a Certified Service Provider of Illumina since 2007 and Authorised Service Provider of Affymetrix since 2004 our array genotyping service stands for highest available quality, fast turnaround times and long-term experience. We analyse standard arrays for human, animal and plant SNP genotyping as well as customised array solutions for all species up to 384-sample arrays.

#### Gene-wide / Individual Marker Genotyping

We are happy to help you in validating your data, fine-mapping a candidate region or determining the individual's genotype at a specific mutation. We will recommend the best technology, depending on the specific project requirements: Roche LightCycler based real-time PCR assays, Fluidigm BioMark, Sequenom MassArray, Sanger sequencing et cetera.

#### **DNA Extraction**

We can extract high-quality DNA from your samples: body fluids, tissue, soil, plant material, faeces, hair follicles, buccal swabs et cetera. We use commercially available extraction kits (manually or automatically) with subsequent DNA quality check.

#### **Consultation and Project Management**

We will find the perfect solution for you by integrating the latest technologies for sequencing and genotyping. One of our in-house experts will be assigned to be your project manager to provide a flexible, competent service with global reach, high industry standards and scalable capacity.

#### **DNA Profiling of Humans and Animals**

With Eurofins Forensics we have Germany's largest commercial provider for DNA forensics in house, working mainly for police and criminal investigators, offering human DNA profiling from scene of crime samples or thousands of buccal swabs in mass screenings. Animal profiling is used for forensic as well as animal breeding purposes.

#### **Cell Line Authenticity Service**

Profit from our DNA profiling experience in forensics! We provide full cell line authenticity services from DNA extraction to DNA profiling. We issue official certificates of authenticity to you that are accepted by peer reviewed scientific journals.

#### **Fragment Length Analysis Services**

We can help you design your microsatellite / STR analysis project. Depending on your lab capabilities we either perform the capillary electrophoresis (CE) only or the whole fragment length analysis project from DNA extraction, primer design and production, assay set-up, PCR and CE for you.

#### **Agrigenomics Services**

We are supporting plant and animal breeders with our superior technical sequencing, genotyping equipment and our scalable capacities. We have a deep understanding of agrigenomic relevant questions and what our breeding customers need. We are proud to have this unique combination: best equipped genomic service laboratories and applied agricultural

expertise in-house and also in our Eurofins Agroscience department. Meet us and experience our outstanding agrigenomics service for large and small projects.

#### **Pharmacogenomics Services**

Comprehensive services are available for individual study or project needs from preclinical phase throughout all phases of clinical trials. Benefit from our professional GLP / GCP compliant project management together with scientifically well-founded consultancy by our in-house experts.

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### Gene Expression Services.

The entire range of gene expression services is available to you – from single target to whole transcriptome analysis. Our choice of quantitative PCR, next generation sequencing as well as microarray methods will be targeted for your research or industrial project.

#### Transcriptome Analysis by Next Generation Sequencing

With our expert knowledge and proprietary protocols for NGS we are happy to help you in de novo transcriptome sequencing or NGS based expression profiling for many species. Find more details in our NGS brochure or contact us.

#### **Transcriptome Analysis by Expression Arrays**

As a Certified Service Provider of Illumina since 2007 and Authorized Service Provider of Affymetrix since 2004 our expression array service delivers highest available quality and fast turnaround times. We analyse standard Affymetrix cartridge and peg-arrays for human, animals, plants and organisms and Illumina expression arrays. Discuss your project with us and we will help you select the right array.

#### miRNA Analysis

Small molecules – large impact. Our miRNA testing service comprises the analysis by microarrays, NGS or qPCR. Discuss your project with us and we help you in selecting the best technology.



#### **Residual DNA Testing**

We have broad experience in the detection of residual DNA in biopharmaceutical and other biotechnical products. We detect and quantify the residual nucleic acids by qPCR from various production stages and from traces to large contaminations.

#### Food and Environment DNA Testing

We are the DNA competence centre for the international Eurofins network, with more than 190 laboratories. We routinely analyse a wide range of samples to determine the species and to quantify DNA contamination of foreign species in the products. We strictly work according to validated and accredited methods that are documented in standard operation procedures.

#### **Target Gene Expression Service**

Eurofins Genomics covers all steps in quantitative PCR (qPCR) – from the development of the experimental strategy to the final data analysis. We use validated or customised probes or SYBR Green assays. Depending on the project we select the best suitable platform, for example Roche LightCycler or Fluidigm BioMark.





We offer you the possibility to gain high-quality RNA from a variety of resources, extracted manually or automatically and with a subsequent quality check. Depending on the number of samples and the further analysis we will recommend you the sampling strategy and help you to get the best out of your samples.

### **DNA Quantification Services.**

#### qPCR Assay Design and Validation

Profit from our unique combination: we are best in primer production and gene synthesis and have broad experience in the qPCR analysis for various applications. We design your qPCR assays and validate according to international guidelines.

#### **Consultation and Project Management**

Discuss your gene expression or DNA quantification needs with us. We will find the perfect solution for you by integrating the latest technologies and regulations. Highest standards (up to GLP / GCP compliance) and well trained in-house experts who focus on your project will satisfy each demand.

### Why Choose Eurofins Genomics For Your Upcoming Project?

Founded in 1990, Eurofins Genomics is part of the Eurofins Scientific Group with laboratories across 37 countries with more than 15,000 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 stateof-the-art technology from all areas related to DNA applications, testing, analysis and research.

#### **Quality Management**

Our QM/QA-System is certified according to ISO 9001, including the requirements of ISO 13485 (medical devices

## Service Is More Than Just A Word For Us.

requirements). Furthermore we are accredited according to ISO 17025. We are also 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 professional quality management procedure.

#### **Superior Sample Preparation**

Our applied genomics department is renowned for DNA pre-paration of all kinds of material, from food to animals and to forensic samples. If you work with extremely difficult samples, we have the expertise to help you to achieve optimum results.



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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:

#### Email:

support-e

Phone: +49 8092

Official b 8 a.m. – 6

### Toll free phone numbers in Europe:

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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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