

Neurogenomics Testing Solutions Market Forecasts to 2034 – Global Analysis By Test Type (Whole Genome Sequencing (WGS), Whole Exome Sequencing (WES), Targeted Gene Panels, Pharmacogenomics Testing, Chromosomal Microarray Analysis (CMA) and Other Neurogenomic Tests), Technology, Application, End User and By Geography

<https://marketpublishers.com/r/N6A7C024F7D4EN.html>

Date: June 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: N6A7C024F7D4EN

Abstracts

According to Statistics MRC, the Global Neurogenomics Testing Solutions Market is accounted for \$1.8 billion in 2026 and is expected to reach \$4.0 billion by 2034 growing at a CAGR of 10.4% during the forecast period. Neurogenomics testing solutions refer to specialized diagnostic platforms and sequencing methodologies designed to analyze the complete genetic and genomic architecture of the nervous system. They function by utilizing advanced molecular techniques to identify pathogenic variants, copy number variations, and epigenetic modifications associated with neurological and neurodevelopmental disorders. These solutions encompass whole genome sequencing, targeted gene panels, and chromosomal microarray analyses that enable precise molecular diagnosis, pharmacogenomic profiling, and personalized therapeutic interventions for complex brain-related conditions.

Market Dynamics:

Driver:

Rising Prevalence of Rare Neurological Disorders

The rising prevalence of rare neurological disorders compels providers to adopt

neurogenomics testing solutions offering precise molecular diagnostic alternatives. Growing clinical recognition of genetic variants driving complex brain conditions accelerates the integration of sequencing platforms into standard care pathways. This transition is supported by advancements in sequencing throughput, which enhance diagnostic yield and reduce analysis timelines. Consequently, institutions are investing in genomic technologies to achieve accurate diagnoses while optimizing long-term patient management strategies.

Restraint:

High Costs and Reimbursement Limitations

The substantial expenses associated with comprehensive genomic sequencing and specialized bioinformatics analysis represent a significant barrier to widespread adoption. Developing accurate testing panels often requires complex molecular workflows and sophisticated data interpretation techniques, which escalate overall diagnostic costs. Furthermore, limited insurance reimbursement coverage for advanced neurogenomic assays restricts their operational accessibility for many patients. These factors collectively constrain market expansion, particularly for diagnostic laboratories operating with limited financial resources and tight operational budgets.

Opportunity:

Expansion in Pharmacogenomics and Targeted Therapies

The expanding pharmaceutical sector presents substantial growth opportunities for neurogenomics testing manufacturers due to increasing demand for pharmacogenomic profiling in targeted drug development. Genomic platforms offer a highly effective pathway to identify patient-specific genetic biomarkers without relying on traditional prescribing methods, utilizing sequencing data as primary inputs. As investments in precision medicine expand and regulators favor genetically guided therapeutic pathways, the adoption of advanced neurogenomic solutions is expected to surge, creating lucrative enterprise avenues.

Threat:

Data Privacy and Ethical Concerns

The innovation of alternative diagnostic methodologies and emerging point-of-care genetic devices poses a considerable threat to the neurogenomics testing market. Traditional rapid diagnostic assays and novel microfluidic platforms often exhibit

superior turnaround times and can be more cost-effective for routine clinical applications. Additionally, the advancement of direct-to-consumer genetic testing enhances the accessibility of basic genomic information. This competitive pressure may hinder the penetration of specialized clinical neurogenomic solutions, particularly where cost and speed are primary considerations.

Covid-19 Impact:

The pandemic initially disrupted neurogenomics testing supply chains and delayed diagnostic research due to laboratory closures. However, the subsequent surge in demand for precise molecular diagnostics accelerated the adoption of advanced sequencing platforms for critical neurological assessments. Post-pandemic, the heightened focus on personalized medicine and genomic data integration has reinforced long-term investments in neurogenomics technologies, driving robust market recovery across diverse clinical sectors.

The whole genome sequencing (WGS) segment is expected to be the largest during the forecast period

The whole genome sequencing (WGS) segment is expected to account for the largest market share during the forecast period, due to its unparalleled comprehensive genomic coverage and widespread applicability across diverse clinical sectors. Whole genome sequencing offers exceptional diagnostic yield and operates effectively in identifying complex pathogenic variants, which significantly reduces diagnostic odysseys and minimizes unnecessary medical interventions. As healthcare systems increasingly prioritize precise molecular diagnostic methods, the demand for specialized WGS platforms continues to surge, thereby solidifying their dominant market position.

The next-generation sequencing (NGS) segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the next-generation sequencing (NGS) segment is predicted to witness the highest growth rate, driven by rapid advancements in high-throughput sequencing technologies and bioinformatics analytics. These technologies enable the precise analysis of multiple genetic targets to produce highly specialized and robust diagnostic outputs tailored for specific neurological applications. The ability to enhance sequencing speed, accuracy, and cost-efficiency through advanced NGS platforms significantly improves process economics. Consequently, increasing investments in genomic research and favorable clinical trends are accelerating commercial adoption.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, due to the presence of well-established molecular diagnostics and genomic research industries that heavily utilize neurogenomics testing solutions. The region benefits from substantial research and development investments, robust intellectual property protection, and supportive government initiatives promoting precision medicine and genomic data integration. Furthermore, the early adoption of advanced sequencing technologies by key industry players in the United States and Canada reinforces the region's dominant position globally.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, due to rapid healthcare modernization and expanding molecular diagnostics sectors in emerging economies. Countries such as China, India, and Japan are increasingly investing in genomic infrastructure and precision medicine technologies to meet growing domestic demand and rising awareness of rare neurological disorders. Additionally, favorable government policies, rising healthcare expenditures, and the availability of cost-effective sequencing platforms are collectively driving the accelerated adoption of neurogenomics testing solutions globally.

Key players in the market

Some of the key players in Neurogenomics Testing Solutions Market include Illumina, Inc., Thermo Fisher Scientific Inc., Invitae Corporation, Ambry Genetics (Konica Minolta), GeneDx (BioReference Laboratories), Fulgent Genetics, Inc., Blueprint Genetics, PreventionGenetics, Centogene N.V., Athena Diagnostics (Labcorp), Mayo Clinic Laboratories, ARUP Laboratories, Quest Diagnostics Incorporated, 23andMe, Inc., Color Genomics, Natera, Inc., and PerkinElmer, Inc.

Key Developments:

In September 2026, Illumina, Inc. launched a next-generation whole genome sequencing platform optimized for rare neurological disorders, achieving a thirty percent improvement in diagnostic yield while significantly reducing analysis time requirements for global clinical laboratories.

In August 2026, Thermo Fisher Scientific Inc. expanded its pharmacogenomics testing

capacity in Europe through a strategic partnership with a leading research hospital, enabling the scalable deployment of novel targeted gene panels for personalized drug therapies.

In July 2026, Invitae Corporation secured a major supply agreement to provide customized chromosomal microarray analysis for a prominent pediatric network, facilitating the efficient integration of advanced diagnostic tools into next-generation neurodevelopmental assessment ecosystems globally.

Test Types Covered:

Whole Genome Sequencing (WGS)

Whole Exome Sequencing (WES)

Targeted Gene Panels

Pharmacogenomics Testing

Chromosomal Microarray Analysis (CMA)

Other Neurogenomic Tests

Technologies Covered:

Next-Generation Sequencing (NGS)

Polymerase Chain Reaction (PCR)

Sanger Sequencing

Microarray Technology

Other Sequencing Technologies

Applications Covered:

Rare Neurological Disorders

Neurodegenerative Diseases

Neurodevelopmental Disorders

Psychiatric Disorders

Neuromuscular Disorders

Other Applications

End Users Covered:

Hospitals and Clinics

Diagnostic and Reference Laboratories

Academic and Research Institutes

Direct-to-Consumer (DTC) Genetic Testing Companies

Pharmaceutical and Biotechnology Companies

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL NEUROGENOMICS TESTING SOLUTIONS MARKET, BY TEST TYPE

- 5.1 Whole Genome Sequencing (WGS)
- 5.2 Whole Exome Sequencing (WES)
- 5.3 Targeted Gene Panels
- 5.4 Pharmacogenomics Testing
- 5.5 Chromosomal Microarray Analysis (CMA)
- 5.6 Other Neurogenomic Tests

6 GLOBAL NEUROGENOMICS TESTING SOLUTIONS MARKET, BY TECHNOLOGY

- 6.1 Next-Generation Sequencing (NGS)
- 6.2 Polymerase Chain Reaction (PCR)
- 6.3 Sanger Sequencing
- 6.4 Microarray Technology
- 6.5 Other Sequencing Technologies

7 GLOBAL NEUROGENOMICS TESTING SOLUTIONS MARKET, BY APPLICATION

- 7.1 Rare Neurological Disorders
- 7.2 Neurodegenerative Diseases
- 7.3 Neurodevelopmental Disorders
- 7.4 Psychiatric Disorders
- 7.5 Neuromuscular Disorders
- 7.6 Other Applications

8 GLOBAL NEUROGENOMICS TESTING SOLUTIONS MARKET, BY END USER

- 8.1 Hospitals and Clinics
- 8.2 Diagnostic and Reference Laboratories
- 8.3 Academic and Research Institutes
- 8.4 Direct-to-Consumer (DTC) Genetic Testing Companies
- 8.5 Pharmaceutical and Biotechnology Companies
- 8.6 Other End Users

9 GLOBAL NEUROGENOMICS TESTING SOLUTIONS MARKET, BY GEOGRAPHY

9.1 North America

9.1.1 United States

9.1.2 Canada

9.1.3 Mexico

9.2 Europe

9.2.1 United Kingdom

9.2.2 Germany

9.2.3 France

9.2.4 Italy

9.2.5 Spain

9.2.6 Netherlands

9.2.7 Belgium

9.2.8 Sweden

9.2.9 Switzerland

9.2.10 Poland

9.2.11 Rest of Europe

9.3 Asia Pacific

9.3.1 China

9.3.2 Japan

9.3.3 India

9.3.4 South Korea

9.3.5 Australia

9.3.6 Indonesia

9.3.7 Thailand

9.3.8 Malaysia

9.3.9 Singapore

9.3.10 Vietnam

9.3.11 Rest of Asia Pacific

9.4 South America

9.4.1 Brazil

9.4.2 Argentina

9.4.3 Colombia

9.4.4 Chile

9.4.5 Peru

9.4.6 Rest of South America

9.5 Rest of the World (RoW)

9.5.1 Middle East

- 9.5.1.1 Saudi Arabia
- 9.5.1.2 United Arab Emirates
- 9.5.1.3 Qatar
- 9.5.1.4 Israel
- 9.5.1.5 Rest of Middle East
- 9.5.2 Africa
 - 9.5.2.1 South Africa
 - 9.5.2.2 Egypt
 - 9.5.2.3 Morocco
 - 9.5.2.4 Rest of Africa

10 STRATEGIC MARKET INTELLIGENCE

- 10.1 Industry Value Network and Supply Chain Assessment
- 10.2 White-Space and Opportunity Mapping
- 10.3 Product Evolution and Market Life Cycle Analysis
- 10.4 Channel, Distributor, and Go-to-Market Assessment

11 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 11.1 Mergers and Acquisitions
- 11.2 Partnerships, Alliances, and Joint Ventures
- 11.3 New Product Launches and Certifications
- 11.4 Capacity Expansion and Investments
- 11.5 Other Strategic Initiatives

12 COMPANY PROFILES

- 12.1 Illumina, Inc.
- 12.2 Thermo Fisher Scientific Inc.
- 12.3 Invitae Corporation
- 12.4 Ambry Genetics (Konica Minolta)
- 12.5 GeneDx (BioReference Laboratories)
- 12.6 Fulgent Genetics, Inc.
- 12.7 Blueprint Genetics
- 12.8 PreventionGenetics
- 12.9 Centogene N.V.
- 12.10 Athena Diagnostics (Labcorp)
- 12.11 Mayo Clinic Laboratories

12.12 ARUP Laboratories

12.13 Quest Diagnostics Incorporated

12.14 23andMe, Inc.

12.15 Color Genomics

12.16 Natera, Inc.

12.17 PerkinElmer, Inc.

List of Tables

Table 1 Global Neurogenomics Testing Solutions Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Neurogenomics Testing Solutions Market Outlook, By Test Type (2023-2034) (\$MN)

Table 3 Global Neurogenomics Testing Solutions Market Outlook, By Whole Genome Sequencing (WGS) (2023-2034) (\$MN)

Table 4 Global Neurogenomics Testing Solutions Market Outlook, By Whole Exome Sequencing (WES) (2023-2034) (\$MN)

Table 5 Global Neurogenomics Testing Solutions Market Outlook, By Targeted Gene Panels (2023-2034) (\$MN)

Table 6 Global Neurogenomics Testing Solutions Market Outlook, By Pharmacogenomics Testing (2023-2034) (\$MN)

Table 7 Global Neurogenomics Testing Solutions Market Outlook, By Chromosomal Microarray Analysis (CMA) (2023-2034) (\$MN)

Table 8 Global Neurogenomics Testing Solutions Market Outlook, By Other Neurogenomic Tests (2023-2034) (\$MN)

Table 9 Global Neurogenomics Testing Solutions Market Outlook, By Technology (2023-2034) (\$MN)

Table 10 Global Neurogenomics Testing Solutions Market Outlook, By Next-Generation Sequencing (NGS) (2023-2034) (\$MN)

Table 11 Global Neurogenomics Testing Solutions Market Outlook, By Polymerase Chain Reaction (PCR) (2023-2034) (\$MN)

Table 12 Global Neurogenomics Testing Solutions Market Outlook, By Sanger Sequencing (2023-2034) (\$MN)

Table 13 Global Neurogenomics Testing Solutions Market Outlook, By Microarray Technology (2023-2034) (\$MN)

Table 14 Global Neurogenomics Testing Solutions Market Outlook, By Other Sequencing Technologies (2023-2034) (\$MN)

Table 15 Global Neurogenomics Testing Solutions Market Outlook, By Application (2023-2034) (\$MN)

Table 16 Global Neurogenomics Testing Solutions Market Outlook, By Rare Neurological Disorders (2023-2034) (\$MN)

Table 17 Global Neurogenomics Testing Solutions Market Outlook, By Neurodegenerative Diseases (2023-2034) (\$MN)

Table 18 Global Neurogenomics Testing Solutions Market Outlook, By Neurodevelopmental Disorders (2023-2034) (\$MN)

Table 19 Global Neurogenomics Testing Solutions Market Outlook, By Psychiatric Disorders (2023-2034) (\$MN)

Table 20 Global Neurogenomics Testing Solutions Market Outlook, By Neuromuscular Disorders (2023-2034) (\$MN)

Table 21 Global Neurogenomics Testing Solutions Market Outlook, By Other Applications (2023-2034) (\$MN)

Table 22 Global Neurogenomics Testing Solutions Market Outlook, By End User (2023-2034) (\$MN)

Table 23 Global Neurogenomics Testing Solutions Market Outlook, By Hospitals and Clinics (2023-2034) (\$MN)

Table 24 Global Neurogenomics Testing Solutions Market Outlook, By Diagnostic and Reference Laboratories (2023-2034) (\$MN)

Table 25 Global Neurogenomics Testing Solutions Market Outlook, By Academic and Research Institutes (2023-2034) (\$MN)

Table 26 Global Neurogenomics Testing Solutions Market Outlook, By Direct-to-Consumer (DTC) Genetic Testing Companies (2023-2034) (\$MN)

Table 27 Global Neurogenomics Testing Solutions Market Outlook, By Pharmaceutical and Biotechnology Companies (2023-2034) (\$MN)

Table 28 Global Neurogenomics Testing Solutions Market Outlook, By Other End Users (2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

I would like to order

Product name: Neurogenomics Testing Solutions Market Forecasts to 2034 – Global Analysis By Test Type (Whole Genome Sequencing (WGS), Whole Exome Sequencing (WES), Targeted Gene Panels, Pharmacogenomics Testing, Chromosomal Microarray Analysis (CMA) and Other Neurogenomic Tests), Technology, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/N6A7C024F7D4EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/N6A7C024F7D4EN.html>