

CRISPR Diagnostics Market Size & Share Analysis - Growth, Trends, & Forecasts (2025 - 2030)

Industry: Diagnostics & Monitoring

URL: <https://www.mordorintelligence.com/industry-reports/crispr-diagnostics-market>

CRISPR Diagnostics Market Size and Share Study Period | 2020 - 2030 |

Market Size (2025) | USD 3.51 Billion |

Market Size (2030) | USD 7.75 Billion |

CAGR (2025 - 2030) | 17.19% |

Fastest Growing Market | North America |

Largest Market | Asia Pacific |

Market Concentration | Low |

Major Players*Disclaimer: Major Players sorted in no particular order

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CRISPR Diagnostics Market Analysis by Mordor IntelligenceThe CRISPR Diagnostics Market size is estimated at USD 3.51 billion in 2025, and is expected to reach USD 7.75 billion by 2030, at a CAGR of 17.19% during the forecast period (2025-2030).

CRISPR diagnostics use advanced gene-editing technology to provide fast, accurate, and cost-effective solutions for detecting genetic disorders and infectious diseases, transforming modern healthcare diagnostics.

The increasing cases of genetic and infectious diseases drive the need for advanced diagnostic solutions, including CRISPR technologies. For instance, the World Health Organization's 2024 Report, published in October 2024, highlighted tuberculosis (TB) as the second most common infectious disease worldwide. In 2023, an estimated 10.8 million people were diagnosed with TB worldwide, including 6.0 million men, 3.6 million women, and 1.3 million children. African countries had the highest incidence rates, while the Americas and Europe had the lowest. This significant burden of infectious diseases increases the demand for advanced diagnostics like CRISPR, which offers precise detection of specific genetic sequences linked to infectious agents and reduces the chances of false positives and negatives, ensuring accurate diagnosis.

Furthermore, the prevalence of genetic disorders, including cystic fibrosis, cancer, arthritis, heart disease, and diabetes, is rising globally. For instance, as per the International Agency for Research on Cancer estimations published in April 2024, the number of new cancer cases globally is expected to increase from 21.3 million in 2025 to 35.3 million by 2050. Similarly, research published in August 2024 in the Lancet Regional Health highlighted an unexpected prevalence of cystic fibrosis (CF) in non-European populations, especially in the Indian subcontinent. This global rise in genetic disorders underscores the demand for advanced technological solutions, potentially driving the market during the forecast period.

Furthermore, ongoing advancements in CRISPR technology improve diagnostic tests' accuracy, speed, and cost-effectiveness, making them more attractive to healthcare providers. For instance, in August 2023, CrisprBits, a biotech start-up specializing in CRISPR gene-editing technology, partnered with Molbio Diagnostics to integrate CRISPR into Point-of-Care (POC) tests. CrisprBits developed a platform for rapid, precise, affordable POC tests for various diseases. CrisprBits led the development of its PathCrisp platform for POC testing, while Molbio Diagnostics used its manufacturing and marketing network to promote and distribute these tests worldwide. The availability of such advanced diagnostics is expected to increase their use in healthcare settings, driving market growth.

The CRISPR diagnostics market is poised for growth due to the growing burden of infectious and genetic diseases, technological advancements, and increasing demand for rapid and accurate diagnostics.

However, it also faces regulatory challenges, and the high development cost could impact its development and adoption, thereby limiting the market's growth potential during the forecast period.

Global CRISPR Diagnostics Market Trends and InsightsEnzymes Segment is Expected to Witness Growth Over the Forecast PeriodThe enzymes segment within the CRISPR diagnostics market is anticipated to experience substantial growth over the forecast period. Several factors drive this growth, such as increasing demand for CRISPR applications, expansion of diagnostic applications, increased funding and investment in genetic testing, and collaboration among industry players.

As CRISPR technology becomes more widely adopted for diagnostic purposes, the need for specific enzymes that facilitate gene editing and analysis is expected to rise. These enzymes play a crucial role in ensuring the efficiency and accuracy of CRISPR-based diagnostics. For example, a January 2024 study in Nucleic Acids Research highlighted that CRISPR-Cas enzymes, known for enabling RNA-guided bacterial immunity, are extensively utilized in biotechnology, especially in genome editing. Class 2 CRISPR-associated enzymes, including the Cas9, Cas12, and Cas13 families, have found applications across research, clinical, and agricultural domains. Such findings underscore the expanding applications of CRISPR diagnostics, fueling the demand for specialized enzymes tailored to these uses.

Furthermore, collaborations among biotech firms, research entities, and healthcare organizations are spurring innovation in enzyme development. For instance, in April 2024, Regeneron invested USD 100 million to harness Mammoth Biosciences' compact Cas enzymes, aiming to implement in vivo CRISPR-based gene editing therapies across diverse tissues and cell types. These joint endeavors enhance enzyme capabilities and broaden their diagnostic applications, suggesting a robust demand for these enzymes in the market during the study period.

Thus, bolstered by the expanding applications of CRISPR diagnostics, increased investments in genetic testing, and collaborative industry efforts, the enzymes segment is poised for substantial growth. This surge is anticipated to be crucial in the broader expansion of the CRISPR diagnostics market in the coming years.

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North America is Expected to Dominate the CRISPR Diagnostics MarketNorth America is set to experience growth during the forecast period, driven by factors such as a high prevalence of chronic and infectious diseases, an increasing emphasis on personalized medicine, heightened investments in research and development, and point-of-care (POC) testing advancements. For instance, a study published in Pathogens in October 2024 highlighted that Mexico recorded 117,412 cases of hepatitis B virus (HBV) infections and 678,258 cases of hepatitis C virus (HCV) infections in 2022. CRISPR diagnostics can significantly improve the treatment of infectious diseases like hepatitis by facilitating swift and precise pathogen detection. Furthermore, CRISPR technology holds promise for crafting targeted therapies, potentially ushering in more effective treatments and enhanced management of infectious diseases.

Furthermore, partnerships among academic institutions, biotech firms, and healthcare entities are spurring innovation and hastening the evolution of CRISPR diagnostic tools. For instance, in October 2024, ERS Genomics Limited, a CRISPR licensee,

nsing entity, and Université de Montréal (UdeM), a Canadian research institution celebrated for its scientific breakthroughs and technology transfer, inked a non-exclusive CRISPR/Cas9 licensing pact. This agreement empowers UdeM with access to ERS' CRISPR/Cas9 patent collection, paving the way for establishing two CRISPR/Cas9 screening platforms at UdeM's Institute for Research in Immunology and Cancer. Such initiatives underscore the commitment to advancing CRISPR technology, fostering innovative diagnostic tools, and driving market growth.

Additionally, a supportive regulatory landscape, underscored by clear directives from entities like the Food and Drug Administration (FDA), streamlines the approval and market entry of CRISPR diagnostic products. For instance, a study in Frontiers in April 2023 noted that the FDA granted emergency use authorization to the Sherlock CRISPR SARS-CoV-2 kit. This marks a significant milestone: the FDA's inaugural endorsement of a SARS-CoV-2 detection tool rooted in CRISPR gene editing and the first instance of this technology being sanctioned for infectious disease detection. The evolution of intuitive CRISPR diagnostic tools paves the way for point-of-care testing, enhancing accessibility and convenience for patients and healthcare professionals, thus driving demand during the forecast period.

In conclusion, the ascent of CRISPR diagnostics in North America is fueled by technological breakthroughs, regulatory backing, bolstered investments, and an intensified focus on personalized, efficient healthcare. These elements solidify CRISPR diagnostics's prominence in the region's healthcare framework.

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Competitive LandscapeThe medical component manufacturing market is consolidated in nature, with significant competition among large companies operating globally and regionally. The competitive landscape includes an analysis A few major companies hold a significant share of the market and are well known, including Agilent Technologies, Inc., Merck KGaA, Thermo Fisher Scientific Inc., SBS Genetech, and Takara Bio Inc., among others. These companies often have substantial resources for research and development.

CRISPR Diagnostics Industry Leaders* Agilent Technologies, Inc.

* Thermo Fisher Scientific Inc.

* Merck KGaA

* Takara Bio Inc.

* SBS Genetech

* *Disclaimer: Major Players sorted in no particular order

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Recent Industry Developments* June 2024: Jumpcode Genomics, a company specializing in genome technology to enhance the understanding of human biology, and Takara Bio USA, Inc., a subsidiary of Takara Bio Inc., resolved their patent dispute and partnered to combine their intellectual property in the targeted removal of unwanted transcripts, such as ribosomal RNAs, from NGS libraries using CRISPR-based technology.

* March 2024: Scope Biosciences, a biotech firm in the Netherlands, secured a EUR 2.5 million (USD 2.68 million) EIC Transition grant, highlighting its innovation in molecular diagnostics. This grant, resulting from a successful two-year co

llaboration with Wageningen University under the ERC-Proof of Concept initiative , will speed up the development of the scopeDx platform, which aims to improve point-of-care diagnostics with high accuracy in on-site settings.
* February 2024: CrisprBits Private Limited introduced OmiCrisp, a CRISPR-based test for diagnosing and monitoring SARS-CoV2 quickly. This test detects the virus and identifies Omicron lineage variants from other known variants of concern. Molecular Solutions Care Health LLP uses the weekly test to monitor the Omicron-derived JN.1 variant in sewage samples from 14 localities in Bengaluru, India.

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**Subject to AvailabilityCompetitive Landscape covers- Business Overview, Financials, Products and Strategies and Recent Developments

Global CRISPR Diagnostics Market Report ScopeAs per the scope of the report, CRISPR-based diagnostic methods detect specific disease-related sequences and then cut them to produce a readable signal.

The CRISPR diagnostics market is segmented into product type, technology type, application, end user, and geography. By product type, the market is segmented into enzymes, kits and reagents, and software and libraries. By technology type, the market is segmented into Cas9, Cas12, and others. The other CRISPR systems include Cas13 and Cas14. By application, the market is segmented into infectious diseases, genetic disorders, cancer, and others. The others include agriculture, food safety, environment monitoring, and many more. By end user, the market is segmented into hospitals and clinics, diagnostic laboratories, pharmaceutical and biotechnology companies, and others. The others include agricultural companies, research institutes, and many more. By geography, the market is segmented into North America, Europe, Asia-Pacific, South America, and Middle East and Africa. The report also offers the market size and forecasts for 17 countries across the region. For each segment, the market sizing and forecasts have been done on the basis of value (USD).

By Product TypeEnzymes |
Kits and Reagents |
Software and Libraries |
By Technology TypeCas9 |
Cas12 |
Others |
By ApplicationInfectious Disease Diagnostics |
Genetic Disorder Diagnostics |
Cancer Diagnostics |
Others |
By End UserHospitals and Clinics |
Diagnostic Laboratories |
Pharmaceutical and Biotechnology Companies |
Other End Users |
GeographyNorth America | United States |

| Canada |
| Mexico |
Europe | Germany |
| United Kingdom |
| France |
| Italy |
| Spain |
| Rest of Europe |

Asia-Pacific | China |
| Japan |
| India |
| Australia |
| South Korea |
| Rest of Asia-Pacific |

Middle East and Africa | GCC |
| South Africa |
| Rest of Middle East and Africa |

South America | Brazil |
| Argentina |
| Rest of South America |

By Product Type | Enzymes |
| Kits and Reagents |
| Software and Libraries |

By Technology Type | Cas9 |
| Cas12 |
| Others |

By Application | Infectious Disease Diagnostics |
| Genetic Disorder Diagnostics |
| Cancer Diagnostics |
| Others |

By End User | Hospitals and Clinics |
| Diagnostic Laboratories |
| Pharmaceutical and Biotechnology Companies |
| Other End Users |

Geography | North America | United States |

	Canada	
	Mexico	
	Europe	Germany
	United Kingdom	
	France	
	Italy	
	Spain	
	Rest of Europe	

| | Asia-Pacific | China |

	Japan	
	India	
	Australia	
	South Korea	
	Rest of Asia-Pacific	
	Middle East and Africa	GCC
	South Africa	
	Rest of Middle East and Africa	
	South America	Brazil
	Argentina	
	Rest of South America	

Key Questions Answered in the ReportHow big is the CRISPR Diagnostics Market? The CRISPR Diagnostics Market size is expected to reach USD 3.51 billion in 2025 and grow at a CAGR of 17.19% to reach USD 7.75 billion by 2030.

What is the current CRISPR Diagnostics Market size? In 2025, the CRISPR Diagnostics Market size is expected to reach USD 3.51 billion.

Who are the key players in CRISPR Diagnostics Market? Agilent Technologies, Inc., Thermo Fisher Scientific Inc., Merck KGaA, Takara Bio Inc. and SBS Genetech are the major companies operating in the CRISPR Diagnostics Market.

Which is the fastest growing region in CRISPR Diagnostics Market? North America is estimated to grow at the highest CAGR over the forecast period (2025-2030).

Which region has the biggest share in CRISPR Diagnostics Market? In 2025, the Asia Pacific accounts for the largest market share in CRISPR Diagnostics Market.

What years does this CRISPR Diagnostics Market cover, and what was the market size in 2024? In 2024, the CRISPR Diagnostics Market size was estimated at USD 2.91 billion. The report covers the CRISPR Diagnostics Market historical market size for years: 2020, 2021, 2022, 2023 and 2024. The report also forecasts the CRISPR Diagnostics Market size for years: 2025, 2026, 2027, 2028, 2029 and 2030.

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