

# Global DNA Forensics Market to Hit US\$5.6 Bn by 2033, Driven by AI, NGS Kits & Asia-Pacific Growth

Rising criminal investigations, advanced sequencing technologies, and government investments propel DNA forensics market, with North America leading globally.

AUSTIN, TX, UNITED STATES,
September 29, 2025 /
EINPresswire.com/ -- The global <u>DNA</u>
<u>forensics market</u> is undergoing a
period of rapid transformation,
fundamentally reshaping the
landscape of criminal investigation,
paternity testing, and judicial
proceedings. With the market valued at



US\$ 3.09 billion in 2024 and forecast to reach US\$ 5.60 billion by 2033, according to DataM Intelligence, its robust CAGR of 7.7% reflects both technological innovation and rising global demand for accurate, rapid, and high-sensitivity genetic profiling. This expansive growth trajectory is chiefly powered by ongoing advancements in sequencing methods, infrastructural

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DNA forensics is transforming justice systems worldwide. With Aldriven software, NGS integration, and Asia-Pacific expansion, the market shows robust growth despite privacy and ethical challenges."

DataM Intelligence

developments, and expanding applications across sectors. DNA forensics is now a critical pillar of modern justice systems, supporting law enforcement in solving cold cases, reducing investigative timelines, and improving conviction accuracy.

Bolstered by strong government funding, North America remains the largest market for DNA forensics, with a 42.5%

share, driven by sophisticated forensic infrastructure and a steadfast focus on expanding criminal investigations and laboratory capacity. Meanwhile, the Asia-Pacific region stands out as the fastest-growing market, supported by surging investments in forensic labs, national DNA databases, and adoption of advanced genetic technologies in countries such as China, India, and Japan.

## Key Highlights from the Report

| ☐ The global DNA forensics market is projected to reach US\$ 5.60 billion by 2033, growing at a  |
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| CAGR of 7.7% (2025–2033).  |
| ☐ North America leads the market with over 42.5% revenue share, attributed to advanced           |
| forensic infrastructure and ongoing public funding.  |
| ☐ The consumables segment dominates at 65.8% market share due to recurring demand for            |
| reagents, extraction kits, and laboratory essentials.  |
| ☐ The Asia-Pacific region is anticipated to be the fastest-growing hub, attaining an 18.9% share |
| and driven by government initiatives and rising forensic investments.                            |

solutions.

☐ Ethical and privacy concerns regarding data storage and consent remain significant challenges to market adoption.

☐ Integration of AI and big data analytics is fueling the rapid growth of DNA forensics software

# Market Segmentation

# By Product Type

The market is dominated by consumables, including reagents, extraction kits, columns, and other disposables, which account for 65.8% of revenue. Their recurring use in forensic labs is driven by criminal investigations, cold-case re-examinations, and demand for high-sensitivity reagents.

#### **Software Solutions**

Software solutions are the fastest-growing segment, representing 15.8% of the market. Growth is fueled by AI, machine learning, and data analytics that streamline sample analysis and automate genealogy searches.

## By End User

Key end users include forensic laboratories, law enforcement agencies, and legal systems, while medical and research institutions are increasingly adopting DNA forensics for broader applications.

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## **Regional Insights**

In 2024, North America accounted for the largest share of the DNA forensics market, driven by the presence of world-leading databases such as the Combined DNA Index System (CODIS) and substantial government investment in forensic infrastructure. The United States is a forerunner in integrated DNA profiling, routinely partnering with private companies to accelerate cold case resolution using state-of-the-art sequencing and genetic genealogy methodologies.

Europe, holding a 21.8% share, is characterized by regulatory rigor and emphasis on privacy through frameworks like the EU General Data Protection Regulation (GDPR). Cross-border collaborations, such as those within the European Network of Forensic Science Institutes (ENFSI), facilitate innovation and standardization across forensic laboratories. European market growth, while steady, is more measured, focusing on balancing adoption with the highest ethical standards and infrastructural modernization.

The Asia-Pacific region attained an 18.9% share in 2024, with China and India rapidly expanding their forensic laboratories and national DNA databases. Driven by rising crime rates and investments under frameworks such as India's Criminal Procedure (Identification) Act, Asia-Pacific is expected to record the fastest compound annual growth, showcasing the role of genetic science in advancing regional judicial systems and public safety.

#### Market Dynamics

#### Market Drivers

Rising criminal investigations and forensic casework underpin expansion across all segments of the DNA forensics market. Law enforcement agencies are increasingly dependent on genetic technologies that enable both rapid identification and re-analysis of degraded samples in cold cases. International collaborations, such as Australia's launch of its forensic laboratory and European initiatives for networked toxicological labs, highlight global commitment to strengthening investigative infrastructure and accelerating adoption of cutting-edge DNA technologies.

#### Market Restraints

Despite its transformative potential, the DNA forensics market faces persistent privacy and ethical concerns. Public apprehension regarding the storage, sharing, and protection of genetic data can lower trust and impede cooperation with law enforcement. Issues of informed consent, especially in forensic genealogy involving relatives, remain complex. Stringent policy frameworks and transparent data protection measures are imperative to maintain trust, safeguard individual rights, and mitigate potential misuse.

### **Market Opportunities**

Recent advances in analytical software, such as Othram's June 2025 launch of deployable workflow solutions, signify enormous opportunity for innovation in case backlog reduction and automation. The integration of NGS (next-generation sequencing) kits into U.S. and European

forensic laboratories aids labs in rapidly processing difficult samples, while emerging markets in Asia-Pacific hold promise for expansive infrastructure development and increased deployment of forensic kits backed by public-private partnerships.

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| ☐ Access in-depth market analytics and long-range forecasts powered by expert insights from                     |
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| DataM Intelligence.   |
| Evaluate competitive positioning and development strategies from industry leaders and                           |
| innovators.   |
| $\hfill \Box$ Gain comprehensive understanding of segmentation trends by product type, application, and region. |
| ☐ Uncover evolving regulatory and ethical landscapes relevant to DNA forensics worldwide.                       |
| <ul> <li>Leverage actionable intelligence for strategic decision-making in forensic, legal, and law</li> </ul>  |
| enforcement applications.   |
| Frequently Asked Questions (FAQs)   |
| ☐ How big is the DNA forensics market globally?   |
| ☐ Who are the key players in the global DNA forensics market?   |
| ☐ What is the projected CAGR for the market (SEO keyword: "DNA forensics market growth rate")?                  |
| ☐ What is the market forecast for 2033?   |
| ☐ Which region is forecast to dominate the DNA forensics industry ("DNA forensics regional                      |
| insights")?   |

## **Company Insights**

- Abbott
- Promega Corporation
- Thermo Fisher Scientific Inc.
- QIAGEN
- Illumina, Inc.
- InVita Healthcare Technologies
- Omega Bio-tek, Inc.
- Takara Bio Inc.
- SCIEX
- Bio-Rad Laboratories, Inc.
- Others

#### **Recent Developments:**

- In September 2025, Thermo Fisher Scientific launched an AI-powered DNA forensic analysis platform for crime laboratories. The system accelerates STR profiling and case matching. Early adoption shows faster case resolution and improved accuracy in criminal investigations.
- In August 2025, Bode Technology expanded its forensic DNA services with next-generation sequencing solutions. The platform supports complex mixture analysis and cold case investigations. Initial deployments highlight higher throughput and enhanced investigative capabilities.

#### Conclusion

The DNA forensics market is advancing at an impressive pace, driven by the growing utilization of genetic technologies for criminal investigation, judicial efficiency, and paternity analysis. With North America commanding market leadership and Asia-Pacific poised for accelerated growth, the sector's evolution is marked by continuous infrastructure improvements, software innovation, and increasingly sophisticated forensic methodologies. As issues of privacy and ethics remain at the forefront, clear regulations and transparent frameworks will shape sustainable market expansion. Leveraging insights from DataM Intelligence, stakeholders across law enforcement, healthcare, and research are empowered to respond to evolving trends, ensuring DNA forensics continues to strengthen judicial outcomes and public safety worldwide.

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