

# **Molecular Cloning Kits Market, 2022-2035: Distribution by Type of Cloning Method (Blunt End Cloning, Ligase Independent Cloning, PCR Cloning, Seamless Cloning, TA Cloning and Other Methods), End-Users (Academic and Research Institutes, Pharmaceutical and Biotechnology Companies, Hospitals and Clinics, and Other End-Users) and Key Geographical Regions (North America, Europe, Asia Pacific, Latin America, and Middle East and North Africa): Industry Trends and Global Forecasts, 2022-2035**

<https://marketpublishers.com/r/M510E0BCA994EN.html>

Date: August 2023

Pages: 238

Price: US\$ 4,799.00 (Single User License)

ID: M510E0BCA994EN

## **Abstracts**

The projected value of molecular cloning kits market is expected to be valued at USD 0.362 billion in 2022 and is anticipated to grow at a CAGR of 25% during the forecast period 2022-2035.

The landscape of gene cloning, historically underexplored, experienced a transformative moment in 1973. A seminal report by A. C. Y. Chang, H. W. Boyer, R. B. Helling, and Stanley N. Cohen marked a pivotal milestone, revealing the potential to clone and isolate individual genes through enzymatic cleavage of DNA into fragments. The ensuing decades witnessed the evolution of genome engineering techniques, facilitating genome alterations in microorganisms and unlocking the capability to produce substances with diverse research and therapeutic applications.

DNA cloning, a meticulously regulated method, has gained widespread recognition and adoption across laboratories worldwide. Notably, amidst the global COVID-19

pandemic, prominent pharmaceutical and biopharmaceutical entities, alongside key players in the synthetic biology market, have actively contributed to research and development endeavors. Their focus encompassed an array of products, including test kits, treatment solutions, and vaccines, employing synthetic biology to combat coronavirus infections.

In navigating the DNA cloning process, various approaches, such as traditional cloning, PCR cloning, ligation-independent cloning, seamless cloning, and recombinant DNA technology, can be applied based on specific requirements. However, despite notable strides in synthetic biology, the DNA cloning process confronts challenges, such as the need for substantial quantities of expensive cloning vectors, diverse reagents, and extended timeframes for completion.

In response to these challenges, innovators within the pharmaceutical industry have diligently sought ways to enhance the DNA cloning process. Among the emerging alternatives, the utilization of DNA cloning kits has surfaced as a practical choice for drug developers, academic institutions, and research centers seeking to surmount the limitations of traditional methods. The current market boasts over 250 DNA cloning kits, distinguished by their affordability, user-friendly attributes, and ability to yield high-quality results in abbreviated timeframes.

The landscape of DNA cloning technologies is marked by a robust intellectual foundation, with over 3,200 patents and 4,000 research articles published in recent years. This influx of intellectual contributions underscores the innovative endeavors of stakeholders in the molecular cloning market. Fueled by escalating demand for gene therapies and the introduction of novel DNA cloning technologies, the molecular cloning market is poised for steady growth in the foreseeable future.

## Research Coverage

DNA Cloning Overview provides a comprehensive look at DNA cloning methods, types of kits and reagents (PCR cloning, TOPO cloning), and discusses advantages, applications, challenges, and future perspectives.

Market Landscape - DNA Cloning Kits offers an overview of current DNA cloning kit market based on components, reactions, cloning methods, fragment types, cloning time, shelf life, and price. Includes analysis of kit providers.

Elaborated profiles on key players in North America, Europe, and Asia Pacific,

including company overview, financials (if available), DNA cloning kit and reagent portfolios, recent developments, and future outlook.

Details a review of 4,400+ peer-reviewed articles on DNA cloning since 2018, covering parameters like publication year, article type, publishers, authors, and journals.

Analyzes grants awarded for DNA cloning projects (2017-2022) based on year, amount, administering institute, support period, grant application type, purpose, activity code, study section, focus areas, program officers, and recipient organizations' geographical distribution.

Examines patents filed/granted for DNA cloning (2017-2021) based on type, publication year, application year, geography, CPC symbols, emerging focus areas, issuing authority, applicant type, leading players, non-industry players, patent assignees, benchmarking, characteristics, age, valuation, and geography.

Market forecast analysis for DNA cloning kits (till 2035), segmented by cloning methods, end-users, and geographical regions.

A case study on service providers, including year of establishment, company size, headquarters location, and regional presence.

## Key Market Companies

Thermo Fisher Scientific

Merck

Takara Bio

Vazyme

GenScript

Promega

Agilent Technologies

Bio-Rad

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