

Gene Synthesis Market By Method (Solid Phase Synthesis, PCR Based Enzyme Synthesis, CHIP Based DNA Synthesis), By End User (Academic and Research Institutes,, Biotech and Pharmaceutical Companies,, Diagnostic Laboratories, Other): Global Opportunity Analysis and Industry Forecast, 2021-2031

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Report description:

The global gene synthesis market size was \$1,110 million in 2021 and is predicted to grow with a CAGR of 18.4%, by generating a revenue of \$5,979 million by 2031.

Gene synthesis is the scientific method for generating or producing artificial genes. Gene synthesis refers to the process by which genes are created using various ways aimed at assembling and constructing genes from nucleotides. Nucleotide is an essential building block in the process of creating nucleic acid.

In reality, RNA and DNA are made up of lengthy sequences of nucleotides. These chemicals are made up of sugar molecules coupled to a phosphate and a nitrogen-containing base. The gene synthesis technique enables scientists and researchers to precisely specify and tailor the desired sequence.

The increase in the geriatric population, rise in the incidence of chronic illnesses, cost-effective treatment, and increase in demand for novel vaccines are some of the primary factors anticipated to drive the gene synthesis market growth. Because of the rising prevalence of infectious diseases around the world, the demand for effective treatments and vaccines has increased, prompting researchers and scientists to accelerate their research efforts and produce effective treatment options for diseases such as cancer and tumors. Certain illnesses can be effectively treated with chemical drugs and biological treatments, such as gene therapy. The application of genomics has enhanced the treatment of endemic and infectious diseases. It also allows us to better understand new drug resistance and identify possible targets for vaccines and new medicines. Gene therapy has piqued the interest of many researchers for the treatment of infectious diseases since it can be treated with recombinant DNA technology, DNA & RNA ribozyme, and single chain antibodies.

The rapid evolution of the technology involved in gene therapy necessitates increased skill work and experienced individuals for

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the insertion of genes or the execution of gene therapy procedures in patients. Most healthcare professionals' inability to carry out the therapy may have a negative impact on the gene synthesis market throughout the forecast period.□

Increase in government support for the research involving synthesis of new genes,□ rise in therapy efficiency, and growth in research and development by the researchers, scientists, and pharmaceutical & biotechnological companies is expected to drive the market growth in the future. In addition, the market growth is expected to boost in the coming years owing to reimbursement policies so that every individual can benefit from the treatment of new technologies developed. This contributes to the rise in the gene synthesis market.□

□□The COVID-19 pandemic has had an impact on the gene synthesis industry, both positively and negatively. During the initial phase of the pandemic, the coronavirus 2019 (COVID-19), which has caused significant challenges in the supply of materials, production, and logistical operations, significantly impacted the cell and gene therapy (CGT) business. When the COVID-19 pandemic began, most businesses and research initiatives around the world suspended operations, reducing market demand for gene synthesizers and their use in laboratories.□

The spread of the COVID-19 pandemic has aided the gene synthesis business by creating enormous growth possibilities. The topic of gene synthesis is being investigated for undiscovered potential, which is supporting the growth of the market in terms of revenue creation.□

The key players profiled in this report include Genscript Biotech Corporation, Thermo Fisher Scientific, Inc., Brooks Automation, Inc., Boster Biological Technology, Twist Bioscience Corporation, Danaher Corporation, Biomatik Corporation, ProteoGenix, ProMab Biotechnologies, Inc., and OriGene Technologies, Inc.□

The gene synthesis market is segmented on the basis of method, end user, and region. As per method, the market has been divided into solid phase synthesis, PCR-based enzyme synthesis, and CHIP-based DNA synthesis. By end user, the market has been classified into academic and research institutes, biotech and pharmaceutical companies, diagnostic laboratories, and other. Region wise, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA.□

Key Benefits For Stakeholders

- This report provides a quantitative analysis of the market segments, current trends, estimations, and dynamics of the gene synthesis market analysis from 2021 to 2031 to identify the prevailing gene synthesis market opportunities.
- The market research is offered along with information related to key drivers, restraints, and opportunities.
- Porter's five forces analysis highlights the potency of buyers and suppliers to enable stakeholders make profit-oriented business decisions and strengthen their supplier-buyer network.
- In-depth analysis of the gene synthesis market segmentation assists to determine the prevailing market opportunities.
- Major countries in each region are mapped according to their revenue contribution to the global market.
- Market player positioning facilitates benchmarking and provides a clear understanding of the present position of the market players.
- The report includes the analysis of the regional as well as global gene synthesis market trends, key players, market segments, application areas, and market growth strategies.

Key Market Segments

By Method

- Solid Phase Synthesis
- PCR Based Enzyme Synthesis
- CHIP Based DNA Synthesis

By End User

- Biotech and Pharmaceutical Companies,
- Diagnostic Laboratories
- Academic and Research Institutes,
- Other

By Region

- North America
- U.S.

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- Canada
- Mexico
- Europe
- UK
- Germany
- France
- Spain
- Italy
- Rest of Europe
- Asia-Pacific
- China
- India
- Japan
- South Korea
- Australia
- Rest of Asia-Pacific
- LAMEA
- Brazil
- Saudi Arabia
- UAE
- South Africa
- Rest of LAMEA
- Key Market Players
- Brooks Automation, Inc.
- Boster Biological Technology
- Twist Bioscience
- Codex DNA
- Biomatik
- promab biotechnologies, inc.
- Thermo Fisher Scientific, Inc.
- Genscript Technology
- Integrated DNA Technologies, Inc.
- OriGene Technologies, Inc.

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