

Global Genome Editing Market Size to Reach USD 15.7 Billion by 2032

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Meta Description: Advances in genome editing technologies, higher finance and investments in genomics, the increasing prevalence of genetic illnesses, and the need for improved treatments and therapies are important factors driving market revenue growth.

The global genome editing market size was USD 3.8 Billion in 2022 and is expected to register a revenue CAGR of 15.2% over the forecast period, according to the latest report by Reports and Data (**Figure 1**).



Figure 1: The Ethics of Genome Editing.

The demand for genome editing is on the rise due to an increasing prevalence of hereditary diseases and the need for personalized therapies. Techniques like CRISPR-Cas9, TALEN, and ZFN are being used to develop new treatments for conditions such as sickle cell anemia, cystic fibrosis, and Huntington's disease. As these methods become more widespread, the demand for genome editing is expected to increase.

Furthermore, advancements in genome editing technologies are driving revenue growth in the market. The development of more precise and effective tools like CRISPR-Cas13, base editing, and prime editing has enabled more accurate gene editing. As a result, genome editing techniques are being used more frequently in academic and medical settings.

Increased funding from both government and commercial sources for genomics research and development has led to the creation of new genome editing approaches and therapies.

According to the World Intellectual Property Organization, the global gene editing industry was valued at \$9.6 billion in 2018, making it one of the fastest-growing technologies.

In 2018, the European Commission enacted the Gene Editing Directive, which establishes criteria and regulations for the use of gene editing in agriculture and food production.

The U.S. Department of Agriculture (USDA) has also released regulations on gene editing in plants, aiming to balance environmental protection, human and animal health, and innovation.

Some Key Highlights from the Report

- In 2021, the CRISPR/Cas9 technique held a significant share of the global genome editing market. This method is crucial for gene therapy, drug development, and biomedical research due to its precise DNA cutting and genetic information insertion capabilities. Its simplicity, high efficiency, and accuracy make CRISPR/Cas9 a popular choice for a wide range of applications.
- The cell line engineering segment dominated the genome editing market in 2021, playing a crucial role in various research projects. It has extensive applications in biotechnology, gene therapy, and drug development by modifying or creating traits in cells through genetic material alteration. With ongoing technological advancements and a growing demand for personalized medicine, the cell line engineering market is expected to see significant growth in the future.
- North America led the global genome editing market in revenue share in 2021, driven by increased investment in gene editing research and development. The region is projected to maintain its dominance due to the presence of numerous biotechnology and pharmaceutical companies focused on advancing genome editing technologies.
- Prominent players in the global genome editing market include CRISPR Therapeutics AG, Thermo Fisher Scientific Inc., GenScript Biotech Corporation, Merck KGaA, Sangamo Therapeutics, Inc., Editas Medicine, Inc., Horizon Discovery Group plc, Intellia Therapeutics, Inc., Lonza Group Ltd., New England Biolabs, Inc., and Precision Biosciences, Inc.
- On January 27, 2022, CRISPR Therapeutics AG entered into a strategic agreement with Capsida Biotherapeutics Inc. Their goal is to develop innovative gene therapies for treating various illnesses using CRISPR/Cas9 technology. CRISPR Therapeutics will contribute its expertise in genome editing, while Capsida will provide its adeno-associated virus (AAV) delivery technology.
- Thermo Fisher Scientific Inc. announced the launch of its Invitrogen GeneArt CRISPR Nuclease mRNA and AAV service on July 15, 2021. This service allows researchers to choose the best delivery format for their genome editing studies. By combining high-quality CRISPR nucleases with Thermo Fisher's expertise in gene editing delivery, the service aims to accelerate research efforts.
- GenScript Biotech Corporation introduced its new CRISPR Genome Editing Cell Line Engineering Service on February 2, 2022. This service enables scientists to create customized cell lines for research and therapeutic purposes. GenScript employs its exclusive CRISPR/Cas9 technology and a team of skilled scientists to offer precise and efficient genome editing.
- On September 6, 2021, Horizon Discovery Group plc launched its new single-cell RNA sequencing (scRNA-seq) service. This service allows researchers to study gene expression patterns in individual cells. Horizon utilizes its SMART-seq2 technology to achieve high-quality RNA sequencing from single cells, providing valuable insights into cellular diversity and function.

For More Detail Information Click on - <https://www.reportsanddata.com/report-detail/genome-editing-market>