

Gene Editing Transfection Chemicals Industry Report: Competitive Landscape and Future Prospects

*The Business Research Company's
Gene Editing Transfection Chemicals
Global Market Report 2025 – Market Size,
Trends, And Global Forecast 2025-2034*

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What Is The Projected [Market Size & Growth Rate Of The Gene Editing Transfection Chemicals Market?](#)

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Through 2034”

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The market for gene-editing transfection chemicals has experienced significant growth in recent years. Its size will increase from \$0.99 billion in 2024 to \$1.07 billion in 2025, with a compound annual growth rate (CAGR) of 8.0%. The ascension observed during the historical period is linked to the early use of CRISPR-Cas9 systems, an elevated concentration on studies related to cancer and genetic disorders, initial requirements from academic and research bodies, the presence of fundamental chemical transfection reagents, and the swift emergence of cell biology and molecular diagnostics.

The market for gene-editing transfection chemicals is projected to witness considerable growth in the upcoming years, increasing to \$1.45 billion by 2029 with a compound annual growth rate (CAGR) of 7.8%. This growth during the forecast period can be accredited to the escalating utilization of gene editing in clinical therapies, amplified investments in biotech and pharma, growing preference for non-viral delivery systems, increasing incidence of rare and genetic diseases, heightened global interest in individualized medicine, and the rise of regenerative treatments. Key trends during this forecast period encompass a transition towards nanoparticle

and lipid-based delivery, the incorporation of automation and high-throughput platforms, the arrival of microfluidic and single-cell delivery systems, integration of nanotechnology, and the development of core-shell silica nanoparticle systems.

Download a free sample of the gene editing transfection chemicals market report:

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What Are Key Factors Driving The Demand In The Global Gene Editing Transfection Chemicals Market?

The rapid progress in gene therapy research is anticipated to drive the expansion of the gene-editing transfection chemicals market in the future. Gene therapy is a method designed to treat or avert diseases through the direct modification or repair of defective genes within an individual's cells. Due to advances in gene-editing technologies like CRISPR, which enables scientists to accurately target and alter faulty genes causing genetic disorders, gene therapy research is showing increased momentum. Gene-editing transfection chemicals play a crucial role in gene therapy research and development, as they allow for the effective delivery of genetic materials like CRISPR-Cas9 components, mRNA, and plasmid DNA into human cells. For instance, in August 2024, PartnerRe, an insurance company based in Switzerland, reported that by the end of 2023, the FDA had sanctioned 7 gene therapies, and 2024 is set to establish a new milestone, with seven more approvals just in the first half of the year. Currently, over 500 gene therapies are under development, and the FDA is anticipated to give the green light to an additional 10 to 20 gene and cell therapies by 2025. Thus, the fast-paced research in gene therapy is fuelling the rise of the gene-editing transfection chemicals market.

Who Are The Emerging Players In The Gene Editing Transfection Chemicals Market?

Major players in the Gene Editing Transfection Chemicals Global Market Report 2025 include:

- Thermo Fisher Scientific Inc.
- Merck KGaA
- Agilent Technologies Inc.
- Lonza Group AG
- Sartorius AG
- Bio-Rad Laboratories Inc.
- Takara Bio Inc.
- GenScript Biotech Corporation
- Integrated DNA Technologies Inc.
- Promega Corporation

What Are The Key Trends Shaping The Gene Editing Transfection Chemicals Industry?

Leading players in the gene-editing transfection chemicals market are intent on bringing forth progressive solutions like lipid nanoparticle (LNP) starter kits to simplify gene therapy and mRNA delivery workflows. The Lipid nanoparticle (LNP) starter kits are essentially ready-to-use formulations or toolkits packed with pre-optimized lipid components and accompanying protocols which are structured to ease the creation and examination of LNP-facilitated delivery

systems. For instance, CordenPharma, a pharmaceutical firm based out of Switzerland, presented their own Lipid NanoParticle (LNP) Starter Kits in February 2024. These kits, which are designed to assist researchers and developers in formulating and refining mRNA-based therapeutics, comprising vaccines and gene therapies, include four prime lipids namely ionizable lipids, helper lipids, sterols, and PEGylated lipids. These lipids are procured from commercial-scale, supreme purity materials ensuring consistency and minimizing the possibility of valuable payload loss during development. CordenPharma's goal, via this robust scalable lipid platform, is to hasten the gene editing and mRNA therapeutic development procedure, while securing precious genetic payloads.

What [Segments Are Covered In The Gene Editing Transfection Chemicals Market](#) Report?

The gene editing transfection chemicals market covered in this report is segmented –

- 1) By Chemical Type: Lipid-Based, Polymer-Based, Peptide-Based, Other Chemical Types
- 2) By Delivery Mechanism: Non-Viral, Viral
- 3) By Application: Biomedical Research, Drug Discovery, Disease Modeling, Agricultural Biotechnology, Vaccine Development, Other Applications
- 4) By End-User: Academic And Research Institutes, Biotechnology Companies, Pharmaceutical Companies, Other End-Users

Subsegments:

- 1) By Lipid-Based: Cationic Lipids, Neutral Lipids, Ionizable Lipids
- 2) By Polymer-Based: Polyethyleneimine (PEI), Poly(L-Lysine) (PLL), Dendrimers
- 3) By Peptide-Based: Cell-Penetrating Peptides (CPPs), Amphipathic Peptides, Targeting Peptides
- 4) By Other Chemical Types: Inorganic Nanoparticles, Hybrid Nanoparticles

View the full gene editing transfection chemicals market report:

<https://www.thebusinessresearchcompany.com/report/gene-editing-transfection-chemicals-global-market-report>

Which Region Is Projected To Hold The Largest Market Share In The Global Gene Editing Transfection Chemicals Market?

In 2024, North America held the most significant share in the global market for gene-editing transfection chemicals. The regions included in the Gene Editing Transfection Chemicals Global Market Report 2025 are North America, Western Europe, Eastern Europe, Asia-Pacific, South America, the Middle East, and Africa, illustrating their projected path of growth.

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