

**Ligase Market - Global Industry Size, Share, Trends, Opportunity, and Forecast,  
2017-2027**

**Segmented By Product (Quick Ligase, T4 DNA Ligase, E.Coli DNA Ligase, T4 RNA  
Ligase, Others), By Source (Archaeobacterium, Escherichia coli, Thermus  
thermophilus, Others), By Application (Ligase Chain Reaction, Ligase Detection  
Reaction, Next Generation Sequencing, Molecular Cloning, Others), By End User  
(Biotechnology & Pharmaceutical Companies, Academic & Research Institutions,  
Others), By company and By Region**

Market Report | 2023-07-01 | 116 pages | TechSci Research

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**Report description:**

The global ligase market is anticipated to observe impressive growth during the forecast period, 2023-2027. The major factors include the rising prevalence of infectious, genetic, and chronic diseases and the increase in R&D activities are impelling the growth of the market. Ligases are enzymes that catalyze the reaction by joining two molecules to form a new chemical bond. Ligase has a crucial role in the molecular diagnostics method, as it makes sure the safe and effective application of targeted therapeutics. The other factors supporting the market's growth are, increasing demand for disease treatment, increasing investments in R&D, growing research & development, expansion of diagnostics and pharmaceutical companies, adoption of advanced technology, and rising world population. Also, the increasing strategic growth, such as mergers, collaborations, and acquisitions, is strengthening the growth of the market. For instance, in 2021, BLIRT S.A. enlarged its laboratory facility at

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Technology Park and Gdansk Science. The new laboratory is involved in growing its production scale for key enzymes and improving production processes.

#### Growing Need for Ligases in Disease Treatment

The surge in incidences of chronic diseases, infectious diseases, and genetic disorders across the globe is bolstering the growth of the market. The rising number of patients suffering from one of these diseases is a contributing factor. Thus, the need for better treatment to provide better patient care is fueling the growth of the market. Not only the geriatric population but the younger generation are prone to these diseases due to unhealthy choices, lifestyle changes, consumption of fast foods, and others. Thus, strengthening the growth of the market. For instance, according to WHO, every year, 17.9 million people die from cardiovascular diseases, followed by 9.3 million deaths by cancer, 4.1 million deaths from chronic respiratory diseases, and lastly, 2.0 million deaths caused by diabetes, including kidney disease. Similarly, according to the estimation of WHO, 10 out of every 1000 people are affected by genetic diseases.

#### Increasing R&D and Heavy Investments Fuels the Market Growth

The rise in research and development (R&D) activities across the globe to use ligase as a therapeutic intervention is propelling the growth of the market. Owing to the increase in research activities, they are used for various purposes such as mutation detection, cloning, drug targets, and others, thus, in turn, impelling the growth of the market. For instance, in March 2022, a research study named "The Role of SUMO E3 Ligases in Signaling Pathway of Cancer Cells" stated that small ubiquitin-like modifier (SUMO)ylation is a reversible post-translational modification that plays a vital role in several aspects of cell physiology, including cell cycle regulation, protein trafficking, and DNA damage repair, which are essential for cell homeostasis. Moreover, the rising investments in R&D activities for enzyme-based molecular diagnostics are facilitating the growth of the market. In 2021, Merck invested \$282.5 million at its global headquarters in Darmstadt. The company is focusing on building a new translational science center for its healthcare business sector and a new learning center.

#### Market Segmentation

The global ligase market is segmented into product, source, application, end user, and company. Based on product, the market is segmented into quick ligase, T4 DNA ligase, E.Coli DNA ligase, T4 RNA ligase, and others. Based on the source, the market is segmented into Archaeobacterium, escherichia coli, Thermus thermophilus, and others. Based on application, the market is segmented into ligase chain reaction, ligase detection reaction, next-generation sequencing, molecular cloning, and others. Based on end-user, the market is divided into biotechnology & pharmaceutical companies, academic & research institutions, and others. In terms of country, the United States is expected to be a lucrative market in the forecast period due to the rising number of research and development and clinical trial programs in the country.

#### Market Players

Bio-Rad Laboratories, Inc., Agilent Technologies, Inc., Codexis, Inc., F. Hoffmann-La Roche AG, Merck KGaA, Promega Corporation, QIAGEN N.V., ArcticZymes Technologies ASA, Thermo Fisher Scientific, Inc., and Takara Bio Inc. are some of the leading companies operating in the market.

#### Report Scope:

In this report, global ligase market has been segmented into the following categories, in addition to the industry trends, which have also been detailed below:

##### -□Ligase Market, By Product:

- o□Quick Ligase
- o□T4 DNA Ligase
- o□E.Coli DNA Ligase
- o□T4 RNA Ligase
- o□Others

##### -□Ligase Market, By Source:

- o□Archaeobacterium
- o□Escherichia coli
- o□Thermus thermophilus
- o□Others

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-□Ligase Market, By application:

o□Ligase Chain Reaction

o□Ligase Detection Reaction

o□Next-Generation Sequencing

o□Molecular Cloning

o□Others

-□Ligase Market, By End User:

o□Biotechnology & Pharmaceutical Companies

o□Academic & Research Institutions

o□Others

-□Ligase Market, By Region:

o□North America

-□United States

-□Canada

-□Mexico

o□Asia-Pacific

-□China

-□India

-□Japan

-□Australia

-□South Korea

o□Europe & CIS

-□Germany

-□France

-□United Kingdom

-□Spain

-□Italy

o□South America

-□Brazil

-□Argentina

-□Colombia

o□Middle East & Africa

-□South Africa

-□Saudi Arabia

-□UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in Global Ligase Market

Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

-□Detailed analysis and profiling of additional market players (up to five).

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