

Recombinant Protein Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The recombinant protein market was valued at approximately USD 1,064 million in 2021 and is estimated to grow with a CAGR of 9.92 % over the forecast period, 2022-2027.

COVID-19 had a significant impact on the growth of the recombinant protein market. With the onset of COVID-19, there had been an increased need for therapeutic and vaccination for its treatment. Many market players and public organizations shifted their focus to research and development activities for the treatment of COVID-19, and recombinant proteins played a vital role in them. For instance, in October 2020, Novavax Inc. received USD 4 million from the Coalition for Epidemic Preparedness Innovations (CEPI) to accelerate the development of a COVID-19 vaccine based on its proprietary recombinant protein nanoparticle technology platform. Thus, such developments amid the pandemic had a pronounced impact on the growth of the market.

Factors such as increasing expenditure on research and development; the growing prevalence of chronic diseases; geriatric population; rising inclination towards biologics and biosimilars; and the launch of advanced recombinant products majorly drive the growth of the market.

According to the American Cancer Society's 2022 statistics, in the United States, there will be an estimated 1,918,030 new cancer cases in 2022. Such a high burden of cancer creates the need for advanced therapeutics for the treatment, and since recombinant proteins are largely used in therapeutics and the development of cancer therapies, such an increase in the cancer burden is expected to drive the demand for recombinant proteins, thereby driving the market's growth. Additionally, increasing investments in research and development aimed at the introduction of new recombinant protein therapeutics also contribute to the growth of the market. For instance, in January 2020, Airway Therapeutics Inc. received USD 15.5 million in a Series C financing round to develop the company's AT-100 novel recombinant human protein rhSP-D, an investigational preventive treatment for the serious

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respiratory disease bronchopulmonary dysplasia (BPD).

Furthermore, in September 2021, Aviva Systems Biology, one of the companies engaged in manufacturing and developing antibodies, immunoassay kits, and recombinant proteins for life science research, launched its new protein-on-demand semi-custom recombinant protein portfolio for life scientists conducting basic research and preclinical studies.

Thus, the recombinant protein market is expected to project significant growth over the forecast period. However, the time-consuming and high cost of production processes and high costs coupled with safety issues may hamper the market's growth over the forecast period.

Recombinant Protein Market Trends

The Antibody Segment is Expected to Grow at the Fast Rate Over the Forecast Period

The recombinant antibody production procedure involves cloning antibody gene libraries into phage vectors and allowing the phages to infect a host cell line. The host cells then produce daughter phages expressing the recombinant antibodies on their surfaces. The genes can be inserted into an expression system, and the antibodies can be produced in large quantities after a process of selection for antibodies with the desired characteristics.

Collaboration among the market players and research institutes is also expected to propel the growth of the market segment. For instance, in June 2020, the Recombinant Antibody Network (RAN), a consortium comprising research groups from UC San Francisco, the University of Chicago, and the University of Toronto, entered into a research collaboration with Celgene, a Bristol Myers Squibb company, to create and develop high-performance recombinant antibodies against diverse targets in human cells.

Companies are also involved in the development of recombinant antibodies for COVID-19 infection. For instance, in February 2021, Sanofi and GSK initiated a new phase 2b study with 720 volunteers aged 18 and over to select the most appropriate antigen dosage for phase 3 evaluation of the adjuvanted recombinant protein COVID-19 vaccine candidate. Also, in September 2020, GigaGen Inc., in collaboration with Waisman Biomanufacturing and Goodwin Biotechnology Inc., initiated large-scale manufacturing of its first-in-class recombinant hyperimmune drug GIGA-2050 for the treatment of COVID-19.

Hence, the aforementioned factors are expected to drive market growth in this segment.

North America is Expected to Hold a Significant Share in the Market and Expected to do Same Over the Forecast Period

North America is expected to lead the recombinant protein market, owing to the increasing expenditure on research, coupled with the presence of healthcare infrastructure and several major market players. The chronic diseases that are on the rise across the region are creating a huge demand for recombinant protein therapies, as recombinant proteins are among the proven solutions for treating such diseases. According to GLOBOCAN statistics, in 2020, 195,499 new cancer cases were diagnosed in Mexico. Such a high incidence of cancer creates the need for effective therapeutics and thus propels the growth of the market.

Furthermore, the presence of key players in the market and the launch of products are also propelling the growth of the market. For instance, in June 2020, Sandoz Canada Inc., a division of Novartis AG, received Health Canada approval for its Ziextenzo, a long-acting recombinant human granulocyte colony-stimulating factor (r-metHuG-CSF) indicated to decrease the incidence of infection in patients with non-myeloid malignancies. Additionally, increasing investment in recombinant DNA and protein technologies to address the situation also boosts the growth of the market. For instance, in April 2020, Sanofi and GSK collaborated to develop vaccines based on Sanofi's recombinant forms of S-protein COVID-19 antigen and GSK's adjuvant technology.

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Thus, owing to the abovementioned factors, the market in the North American region is expected to project growth over the forecast period.

Recombinant Protein Market Competitor Analysis

The recombinant protein market is moderately competitive and consists of several major players, including Eli Lilly and Company, Merck KGaA, and Novo Nordisk AS. The companies are implementing certain strategic initiatives, such as mergers, new product launches, acquisitions, and partnerships, that help them strengthen their market positions.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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