

Monoclonal Antibodies Market Assessment, By Production Methods [In Vivo, In Vitro], By Indication [Disease Treatment, Diagnosis, Research], By Source [Chimeric, Human, Murine, Humanized, Others], By Route of Administration [Oral, Intravenous, Subcutaneous, Intramuscular, Intravitreal, Others], By Distribution Channel [Hospital Pharmacy, Retail Pharmacy, Online Pharmacy, Others], By End-users [Hospitals, Specialty Clinics, Homecare, Others], By Region, Opportunities and Forecast, 2017-2031F

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Report description:

Global monoclonal antibodies market size was valued at USD 216.4 billion in 2023, which is expected to reach USD 554.84 billion in 2031, with a CAGR of 12.49% for the forecast period between 2024 and 2031F. The expansion of the global monoclonal antibodies market stems from augmented biotechnology research, escalating chronic disease prevalence, advancements in technology, broader therapeutic applications, and an increasing desire for personalized medicine. Moreover, the approval and efficacy of novel monoclonal antibody-based therapies play a substantial role in driving the growth of the global monoclonal antibodies market.

The substantial growth of the global monoclonal antibodies market derives primarily from various pivotal elements. Initially, the increasing emphasis and investment in biotechnology research have notably fueled an upward trend. The expanded research environment has nurtured the creation of groundbreaking therapies based on monoclonal antibodies, opening pathways for fresh treatment approaches. Moreover, the increasing worldwide incidence of chronic diseases necessitates precise and effective treatments. Monoclonal antibodies, known for their precision in targeting disease agents, have emerged as promising solutions for

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managing diverse chronic conditions. Additionally, technological advancements have played a crucial role by refining production processes and augmenting the accessibility and effectiveness of monoclonal antibody treatments in the global monoclonal antibodies market.

Expanding use of monoclonal antibodies into non-traditional medical domains has further propelled expansion of the global monoclonal antibodies market. Their application now spans across various fields such as oncology, autoimmune disorders, infectious diseases, and more, amplifying their relevance in addressing a broad spectrum of health concerns. The global monoclonal antibodies market is influenced by the rising demand for personalized medicine, fueled by a deeper comprehension of individual disease responses, accelerating the adoption of monoclonal antibodies. Their adaptability to specific molecular targets aligns seamlessly with the personalized healthcare approach, underscoring their significance in modern medical practices. Furthermore, the endorsement and proven effectiveness of new monoclonal antibody therapies reinforce their market standing, instilling greater confidence among healthcare providers and patients alike. It solidifies their pivotal role in continually propelling the ongoing expansion of the global monoclonal antibodies market.

Escalating Chronic Disease Prevalence

The growing prevalence of chronic illnesses acts as a major driver fuelling the expansion of global monoclonal antibodies market. Roughly one in three persons worldwide deal with several chronic illnesses. In the United States, four out of ten persons have two or more chronic diseases, and six out of ten adults have one or more. With chronic conditions impacting a larger population worldwide, there is an increased demand for precise and efficient therapeutic remedies.

Monoclonal antibodies are commended for accurately pinpointing specific disease-causing elements that have become fundamental in managing various chronic health issues. Their capability to precisely identify and counteract these elements position them as a promising avenue for addressing ailments such as cancer, autoimmune disorders, and persistent infections. As complexities of the molecular intricacies behind chronic diseases advance, monoclonal antibodies provide customized treatments, addressing the intricacies of individual patient responses. This synchronization between the requirement for accurate, targeted treatments and the adaptability of monoclonal antibodies significantly elevates their importance in tackling the surge of chronic diseases, thereby fostering the growth of the global monoclonal antibodies market.

Technological Advancements

Advances in technology within monoclonal antibody development and manufacturing have transformed the global monoclonal antibodies market. Various platforms have arisen, refining manufacturing procedures and boosting effectiveness. Breakthroughs such as recombinant DNA technology and high-throughput screening accelerated antibody discovery and production. Moreover, enhancements in bioreactor design and purification methods optimize production, guaranteeing increased yields and purity levels. These technological leaps accelerate antibody development and enhance cost-efficiency and scalability, satisfying the rising need for these treatments. Thus, these advancements significantly drive the rapid expansion of the global monoclonal antibodies market. SUREmAb is an offering launched in September 2023 by JSR Life Sciences Company KPI Biopharma, Inc., based on the KBI SUREtechnology platform and intended to optimise and economically manufacture monoclonal antibodies (mAbs). It is intended to shorten the time needed for development. Furthermore, SUREmAb is designed to deliver titers of up to 10g/L using a less expensive approach to maximise ROI and optimise operational efficiency.

Government Initiatives

Around the globe, governments are proactively executing diverse initiatives to encourage global monoclonal antibodies market growth. These efforts involve a range of approaches: funding research and development, providing incentives for biotech firms, optimizing regulatory procedures to expedite approvals, and fostering partnerships between academia and industry. Moreover, certain government aid in infrastructure improvements is expected to fortify manufacturing capacities and ensure effective distribution channels. These coordinated governmental actions underscore their acknowledgment of monoclonal antibodies' significance in healthcare, aiming to stimulate advancements, affordability, accessibility, and broader market expansion. As part of Project NextGen, which aims to improve readiness for COVID-19 strains and variants, the U.S. Department of Health, and Human Services (HHS) announced the extension of its public-private partnership with Regeneron Pharmaceuticals, Inc., an American biotechnology company, to develop life-saving monoclonal antibodies in September 2023. The HHS is dedicated to cutting down prescription expenses for every American. In the agreement, Regeneron promised that any new product commercialized in the list price within the United States would match or be lower than the retail price compared to the global

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markets.

Monoclonal Antibodies for Cancer Treatment

Monoclonal antibodies are integral in cancer treatment, serving as a significant driver for the growth of the global monoclonal antibodies market. Their precision targets cancer cells while preserving healthy ones and reducing adverse effects compared to conventional treatments. Operating through mechanisms like inhibiting cell growth or marking cells for immune elimination, these antibodies demonstrate their effectiveness in approved therapies like trastuzumab in breast cancer or rituximab in lymphoma. Ongoing research exploration synergizes them with other treatments for amplified results. Their triumph in cancer therapy escalates demand, fueling ongoing market growth and presenting hopeful avenues for more precise and potent cancer management.

Manaolana Oncology Inc., a new firm founded to explore and promote antibody-based therapeutics against novel cancer antigens, was unveiled in September 2023 by Panacea Venture and The University of Texas MD Anderson Cancer Centre. To advance promising treatments into clinical trials at MD Anderson, Manaolana Oncology aims to expand on the inventive antibody production capabilities and intellectual property of MD Anderson by conducting research and developing novel monoclonal antibodies (mAbs) and other antibody-based therapies for a range of cancer types.

Dominance of Chimeric Monoclonal Antibody

The global monoclonal antibodies market sees a substantial demand for chimeric antibodies owing to their distinct blend of human and non-human antibody components. The hybrid makeup amplifies their therapeutic value by lessening immune responses and enhancing effectiveness. Widely applied in cancer and autoimmune disorder treatments, these antibodies demonstrate minimal side effects and heightened precision in targeting. The market's keen interest in these antibodies arises from their capacity to deliver superior treatment results, mitigate adverse effects, and elevate patient tolerance. Consequently, their remarkable demand and prominence persist in the global monoclonal antibodies sector. Enzene Biosciences released Cetuximab, a biosimilar of the cancer medication Erbitux, in May 2023. A single patient's eight weeks of treatment with cetuximab, a therapeutic chimeric monoclonal antibody, costs over USD 30 thousand. It is used as a targeted therapy for metastatic colorectal cancer (mCRC) and cancer of the head and neck. Cetuximab from Enzene is made using Chinese Hamster Ovary (CHO) cell lines, which produce more human-like glycosylation patterns. As a result, unfavourable effects in clinical trials are much less common in India.

Future Market Scenario

The future of the global monoclonal antibodies market holds considerable promise, attributed to diverse factors. Ongoing research continuously unveils fresh antibody therapies, extending their applications beyond current boundaries. Technological advancements, such as refined manufacturing approaches and inventive antibody designs, drive cost-effectiveness and bolster therapeutic efficiency. Moreover, the rising worldwide prevalence of chronic ailments perpetuates the demand for precise, personalized treatments, an area where monoclonal antibodies demonstrate significant potential. Government support through funding and streamlined regulations further accelerates market growth. Additionally, the market's adoption of advanced antibody structures, including chimeric varieties, underscores the persistent pursuit of improved patient outcomes. The combination of factors establishes a platform for substantial growth in the global monoclonal antibodies market, promising enhanced innovation, expanded applications, increased accessibility, and heightened effectiveness in managing diverse health conditions.

Key Players Landscape and Outlook

Multiple companies in global monoclonal antibodies market are actively seeking collaborative alliances. These partnerships facilitate the consolidation of knowledge, resources, and technologies, fostering innovation and expediting research and development endeavors. Often, these collaborations entail biotech entities partnering with pharmaceutical leaders, academia, or research bodies to leverage combined strengths in discovering new therapies or refining the current ones.

Through joint ventures, licensing pacts, and research collaborations, there is a mutual exchange of expertise and capabilities, aiming to bolster product pipelines, hasten regulatory approvals, and broaden market presence. The concerted effort ensures a more robust competitive advantage amid the dynamic realm of monoclonal antibody therapies.

A biotech business Icosagen and the Swedish company Salipro Biotech signed a multi-target antibody research partnership in October 2023. According to a statement released on October 10, the agreement made use of Salipro's exclusive platform

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technology for membrane proteins to find medications that specifically target G protein-coupled receptors (GPCRs) and solute carrier (SLC) transporters. These membrane proteins are involved in autoimmune disorders and cancer, among other things.

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