

Immune Cell Engineering Market Growth Rate, Sales, Consumption Manufacturers, Market Shares and Forecast by 2030

Global Immune Cell Engineering Market size is expected to reach US\$ 11.66 Bn by 2030, from US\$ 2.82 Bn in 2023, at a CAGR of 22.5% during the forecast period.

BURLINGAME, WASHINGTON, UNITED STATES, December 4, 2023
/EINPresswire.com/ -- Market Overview:

Immune cell engineering involves genetically modifying immune cells such as T cells, NK cells, and dendritic cells to recognize and attack cancer cells. These engineered immune cells hold potential in the treatment of various cancers and infectious diseases.

Market Dynamics:

The global [immune cell engineering market](#) is witnessing significant growth owing to rise in number of immuno-oncology clinical trials and FDA approvals of CAR T-cell therapies. According to clinicaltrials.gov, as of June 2023, there were over 5,000 active immunotherapy clinical trials ongoing globally. In addition, the approval of Kymriah and Yescarta, the first CAR T-cell therapies, in 2017 has accelerated research activities in this field. Furthermore, increasing investments by pharmaceutical companies and venture capital firms in start-ups focused on developing novel immune cell engineering platforms is also fueling market growth. For instance, Gilead Sciences acquired Kite Pharma in 2017 for \$11.9 billion to gain access to its CAR T-cell therapy platform, which delivered the first commercialized CAR T-cell therapy.

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MARKET RESEARCH REPORT 2023 INDUSTRY ANALYSIS, FUTURE TRENDS WITH TOP COMPANY PROFILES BY 2030



Immune Cell Engineering Market Analysis

- Brief Overview to the research study.
- Table of Contents The scope of the study's coverage
- Leading market participants
- Structure of the report's research framework
- Coherent Market Insights' research approach

Major companies in Immune Cell Engineering Market are:

- Thermo Fisher Scientific
- Merck KGaA
- Danaher Corporation
- Lonza Group
- Miltenyi Biotec
- Takara Bio Group
- CellGenix GmbH
- FUJIFILM Irvine Scientific
- Agilent Technologies
- Bio-Techne Corporation
- Bio-Rad Laboratories
- BD
- Charles River Laboratories
- Creative Bioarray
- Sartorius AG
- Novogene Corporation
- AGC Biologics
- Catalent
- WuXi AppTec
- ReachBio LLC

Note: Major Players are sorted in no particular order.

Increasing investment in cell therapy research is driving growth in the immune cell engineering market

The immune cell engineering market has seen significant growth in investments towards cell therapy research over the past decade. Large pharmaceutical and biotechnology companies have been pumping massive funds to develop innovative cell therapies to treat various types of cancer as well as other chronic and genetic diseases. For example, Gilead Sciences acquired Kite Pharma for \$11.9 billion in 2017 to strengthen its cell therapy portfolio. Johnson & Johnson also

acquired Activatio Therapeutics for \$375 million to enhance its expertise in engineered T cell therapies. Such heavy investments indicate strong confidence in cell therapies and their commercial potential. As more treatment candidates enter clinical trials, it is stimulating demand for cell processing equipment, reagents, and other services required for engineering immune cells. More positive clinical data can further encourage investment flows into this area.

Rising development costs pose a challenge for market players

While the potential of immune cell engineering is immense, developing safe and effective cell therapy products is an extremely complex and expensive endeavor. The manufacturing processes involved in immune cell engineering are highly specialized and require sophisticated infrastructure and qualified personnel. This makes initial set up and routine operations very costly. Clinical trials of cell therapies also tend to have small sample sizes but high per-patient costs. Bringing a single cell therapy product to market can cost hundreds of millions of dollars. The high costs put immense financial pressure on small biotechs and startups. Even large pharmaceutical companies find cell therapy R&D a heavy burden. The costs have deterred many players and make commercialization of therapeutic applications difficult. Minimizing production expenses through technological advancements will be crucial to tackle this challenge.

Adoption in new therapeutic areas presents a lucrative opportunity

So far immune cell engineering has mainly focused on developing treatments for cancer. However, experts now realize the technique can be useful for various other disease types as well. Diseases like autoimmune disorders, neurodegenerative conditions, and metabolic disorders disrupt the normal functioning of the immune system and cells. Engineering immune cells to tackle the underlying issues could unlock new treatment paradigms for such conditions. This provides a large commercial opportunity as prevalence of non-oncology diseases is significantly higher than cancer. Companies are actively conducting R&D to explore novel immune cell therapy applications beyond oncology. Successful translation of approaches to other clinical areas will expand the market scope tremendously.

Shift towards personalized treatments is a notable emerging trend

One of the important trends gaining traction in the immune cell engineering market is the shift towards personalized treatment approaches. Traditionally, cell therapy products are developed as one-size-fits-all solutions. However, mounting evidence shows outcomes can be optimized by tailoring therapies to individual patient characteristics. Modern engineering methods allow developing personalized treatments by precisely characterizing a patient's immune system and disease, then modifying cells accordingly. Several innovative companies are building capabilities around personalized cell therapy manufacturing. The trend reflects growing focus on precision medicine. It improves treatment efficacy and safety. As technologies advance, personalized cell engineering could increasingly become the new normal, driving higher and broader market demand.

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Highlights of the global Immune Cell Engineering Market report:

□ This analysis provides market size (US\$ Million) and compound annual growth rate (CAGR%) for the forecast period (2023-2030), using 2021 as the base year. It also covers the global Immune Cell Engineering Market in-depth.

□ It offers enticing investment proposition matrices for this sector and explains the likely future growth of key revenue streams.

□ Additionally, this study offers crucial insights into market forces, limitations, opportunities, new product introductions or approvals, market trends, regional perspective, and competitive tactics used by top rivals.

□ Based on the following factors: company highlights, product portfolio, significant highlights, financial performance, and strategies, it covers key players in the global Immune Cell Engineering Market.

□ Marketers and company leaders will be able to make wise decisions about next product launches, type updates, market expansion, and marketing strategies thanks to the insights from this research.

□ A wide spectrum of industry stakeholders are covered by the global Immune Cell Engineering Market research, including investors, vendors, product producers, distributors, new entrants, and financial analysts.

□ The many strategy matrices used in researching the global Immune Cell Engineering Market will aid stakeholders in making decisions.

The research was developed through the synthesis, analysis, and interpretation of data gathered from multiple sources on the parent market. Additionally, analysis has been done of the economic circumstances and other economic indicators and factors to evaluate their respective impact on the Immune Cell Engineering Market, along with the present impact, so as to develop strategic and informed projections about the scenarios in the market. This is mostly due to the developing countries' unmet potential in terms of product pricing and revenue collection.

Key Questions Answered In The Report:

- Which regional market will experience the greatest and most rapid growth?

- Who are the top five Immune Cell Engineering Market players?
- How will the Immune Cell Engineering Market evolve over the next six years?
- What application and product will dominate the Immune Cell Engineering Market?
- What are the market drivers and constraints for Immune Cell Engineering Market?
- What will be the Immune Cell Engineering Market's CAGR and size during the forecast period?

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