

Fc Region and Glycoengineered Antibodies Market: Focus on Type of Fc Engineering and Therapeutics (3rd edition), 2021-2035

<https://marketpublishers.com/r/F725D842E87EEN.html>

Date: July 2023

Pages: 290

Price: US\$ 4,799.00 (Single User License)

ID: F725D842E87EEN

Abstracts

The projected value of Fc region and glycoengineered antibodies market is expected to be valued at USD 21,600 million in 2021 and is anticipated to grow at a CAGR of 5% during the forecast period 2021-2035.

With nearly 100 monoclonal Fc antibodies receiving approval and a robust clinical pipeline comprising over 550 molecules, the domain of antibody-based pharmacological interventions stands as a rapidly advancing sector within the biopharmaceutical industry. Projections indicate that these interventions are poised to contribute substantially, with an estimated cumulative sales figure of USD 300 billion by the year 2025.

Within the specific realm of antibody therapeutics, there has been a noteworthy surge in interest surrounding engineered antibodies, particularly those developed through modifications to the fragment crystallizable (Fc) region. Various modifications, such as glycoengineering, protein engineering, or isotype chimerism, implemented in the Fc region, have demonstrated the capacity to enhance diverse effector functions. These functions include antibody-dependent cellular cytotoxicity (ADCC), complement-dependent cytotoxicity (CDC), antibody-dependent cellular phagocytosis (ADCP) activity, and/or the extension of the molecule's half-life. Notably, numerous Fc engineering technologies also facilitate the selective suppression of effector functions in specific pathways, actively contributing to the development of anti-cancer antibodies.

The robust body of evidence validating the therapeutic applications of Fc engineering platforms has resulted in the establishment of numerous strategic partnerships focused on therapy development and clinical research. Substantial investments have followed,

directed towards innovator companies engaged in this field. This sustained research effort has yielded significant milestones, exemplified by the emergence of blockbuster drugs such as Gazyva® (for Chronic Lymphocytic Leukemia) and POTELEGIO® (for S?zary syndrome). Additionally, recent years have witnessed regulatory approvals for several Fc-engineered antibody products, including Margenza™, MONJUVI®, and SKYRIZI™. The year 2021 marked the approval of two Fc-engineered antibodies, namely Sotrovimab and Etesevimab, for the treatment of COVID-19.

The momentum in Fc-engineered antibody development continues, with numerous drugs in the development pipeline under investigation by both small and established pharmaceutical companies. The promising clinical results and ongoing technical advancements, coupled with the growing interest among biopharmaceutical developers, are expected to drive pipeline products to higher stages of development and eventual commercialization. Consequently, a commendable market growth trajectory is anticipated during the forecast period.

Research Coverage

A comprehensive introduction to antibodies, covering their structure, history, isotypes, and mechanisms, along with insights into the Fc region, effector functions, Fc receptors, and trends shaping the market's future.

Details of over 125 programs for treating various conditions, offering a thorough analysis of Fc protein and glyco-engineered antibodies based on parameters like development phase, therapeutic area, target gene, and more.

Profiles of major players in Fc engineered antibodies development, encompassing company overviews, financial information, product portfolios, recent developments, and future outlooks.

Detailed collaborations since 2016 related to Fc engineered antibodies, considering factors like the year of agreement, therapeutic focus, and regional distribution.

A detail analysis into completed, ongoing, and planned clinical studies of Fc engineered antibodies, examining parameters such as trial status, patient population, and geographical regions.

A detailed analysis of grants awarded for Fc protein and glyco-engineered

antibodies research between 2016-2021, considering factors like award amount, administering institutes, and regional distribution.

Examined around 6,500 patents related to Fc engineering filed/granted since 2016, highlighting trends across parameters like patent type, publication year, and inventor information.

A market forecast analysis until 2035, segmented by Fc engineering type, therapy type, therapeutic area, administration route, and geographical regions, with three forecast scenarios.

Key Market Companies

AbbVie

Alexion Pharmaceuticals

AstraZeneca

Genentech

MacroGenics

Kyowa Kirin

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