

# **Vaccine Adjuvants Market Report by Product Type (Adjuvant Emulsions, Pathogen Components, Particulate Adjuvants, Combination Adjuvants, and Others), Route of Administration (Oral, Intramuscular, Intranasal, Subcutaneous, Intradermal, and Others), Diseases (Cancer, Infectious Diseases, and Others), Application (Research, Commercial), and Region 2023-2028**

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## **Abstracts**

The global vaccine adjuvants market size reached US\$ 884 Million in 2022. Looking forward, IMARC Group expects the market to reach US\$ 1,812 Million by 2028, exhibiting a growth rate (CAGR) of 12.71% during 2022-2028. The growing focus on developing effective vaccines, increasing prevalence of infectious diseases among the masses, and rising awareness about the importance of vaccination in preventing diseases and improving public health are some of the major factors propelling the market.

Vaccine adjuvants are substances or compounds added to vaccines to enhance the immune response triggered by the vaccine. They undergo extensive testing and regulatory oversight to ensure that they do not cause extreme effects beyond mild and transient reactions at the injection site. They are compatible with the antigens in the vaccine and should not interfere with their activity. They serve as immunological boosters, ensuring a more robust and long-lasting immune response. They significantly improve the ability of the body to recognize and remember antigens, resulting in a more robust and durable immune response.

At present, the increasing demand for vaccine adjuvants as they allow for the use of smaller vaccine doses, which can be critical in situations where vaccine production is impelling the growth of the market. Besides this, the rising popularity of vaccine adjuvants, as they enable the rapid development of vaccines during pandemics and allow smaller quantities of antigens to be used without compromising efficacy, is contributing to the growth of the market. In addition, the growing conduct of vaccination drives by governing agencies of various countries to eradicate various diseases is offering a favorable market outlook. Apart from this, increasing advancements in biotechnology, immunology, and genomics are supporting the growth of the market. Additionally, the rising awareness about the importance of vaccination in preventing diseases and improving public health is bolstering the growth of the market.

#### Vaccine Adjuvants Market Trends/Drivers:

##### Growing focus on developing effective vaccines

The growing focus on developing effective vaccines is currently exerting a positive influence on the growth of the vaccine adjuvants market. Besides this, vaccine adjuvants play a crucial role in improving the immune response generated by vaccines, thereby ensuring better protection against infectious diseases. As pharmaceutical companies and research institutions continue to invest in the development of novel vaccines for emerging diseases, the need for advanced and efficient adjuvants is rising. Furthermore, the ongoing global vaccination campaigns for eradicating numerous infectious diseases caused by various viruses are underscoring the significance of vaccine adjuvants in expediting the production of safe and effective vaccines. The continuous research and development (R&D) activities aimed at creating vaccines with higher immunogenicity are propelling the demand for adjuvants to new heights.

##### Rising advancements in adjuvant technology

At present, rising advancements in adjuvant technology are bolstering the growth of the vaccine adjuvants market. This sector is experiencing a remarkable transformation as ongoing research and development (R&D) initiatives are continually enhancing the capabilities and efficacy of adjuvants used in vaccine formulations. Researchers and scientists are currently developing and fine-tuning innovative adjuvant technologies that are capable of significantly augmenting the immune response elicited by vaccines. These advancements are being implemented in vaccine formulations that target various infectious diseases. Furthermore, the advancements in adjuvant technology are fostering greater vaccine development efficiency and effectiveness. This translates into a more rapid response to emerging infectious threats, such as novel pathogens and

evolving viral strains.

Increasing prevalence of infectious diseases among the masses

The increasing prevalence of infectious ailments among the masses is currently positively influencing the growth of the vaccine adjuvants market. This phenomenon is primarily attributed to the heightened awareness of the importance of vaccination as a preventive measure against various infectious diseases. As these diseases continue to pose a significant public health threat, there is a growing demand for effective vaccines. Additionally, the urgency to develop vaccines at an accelerated pace is leading to an increase in investments in adjuvant research and development (R&D). This heightened focus on vaccine adjuvants is benefiting the current market and paving the way for future growth opportunities.

Vaccine Adjuvants Industry Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global vaccine adjuvants market report, along with forecasts at the global, regional and country levels from 2023-2028. Our report has categorized the market based on product type, route of administration, diseases and application.

Breakup by Product Type:

- Adjuvant Emulsions
- Pathogen Components
- Particulate Adjuvants
- Combination Adjuvants
- Others

Adjuvant emulsions dominate the market

The report has provided a detailed breakup and analysis of the market based on the product type. This includes adjuvant emulsions, pathogen components, particulate adjuvants, combination adjuvants, and others. According to the report, adjuvant emulsions represented the largest segment.

Adjuvant emulsions are specialized formulations used in various fields, including vaccines, to enhance the immune system. They can help stabilize antigens that may otherwise degrade or be rapidly cleared from the body. Adjuvant emulsions can make vaccine antigens more immunogenic, meaning they are better at stimulating an immune

response. This is particularly important when dealing with antigens that are less immunogenic on their own. Moreover, adjuvant emulsions used in vaccines go through rigorous testing for safety and efficacy before receiving regulatory approval. Furthermore, the use of adjuvant emulsions can result in a more effective vaccine, providing better protection against the targeted disease. This is particularly important in cases where a strong and sustained immune response is needed.

#### Breakup by Route of Administration:

- Oral
- Intramuscular
- Intranasal
- Subcutaneous
- Intradermal
- Others

Intramuscular holds the largest share in the market

A detailed breakup and analysis of the market based on the route of administration has also been provided in the report. This includes oral, intramuscular, intranasal, subcutaneous, intradermal, and others. According to the report, intramuscular accounted for the largest market share.

Intramuscular vaccine administration offers numerous benefits that contribute to its widespread use in immunization programs. It facilitates a rapid and robust immune response due to the enhanced blood supply in the muscles, ensuring efficient uptake of vaccine antigens into the bloodstream. It also maintains the stability and integrity of vaccines, protecting fragile antigens and enabling reliable vaccine delivery. Furthermore, it is versatile and suitable for a wide array of vaccines, including inactivated, live attenuated, and protein-based formulations, making it a preferred route for various immunizations. This adaptability extends to all age groups, from infants to the elderly, facilitating comprehensive vaccination programs.

#### Breakup by Diseases:

- Cancer
- Infectious Diseases
- Others

Infectious diseases hold the biggest share in the market

A detailed breakup and analysis of the market based on the diseases has also been provided in the report. This includes cancer, infectious diseases, and others. According to the report, infectious diseases accounted for the largest market share.

Vaccine adjuvants play a crucial role in the development of effective vaccines against infectious diseases. They stimulate and enhance the immune response to the antigens present in the vaccine. This means that smaller amounts of antigen can be used, reducing the cost of vaccine production and the potential for side effects. Vaccine adjuvants can help prolong the immune response, ensuring that the body continues to produce antibodies and memory cells for an extended period. This can lead to longer-lasting protection against infectious agents. Moreover, vaccine adjuvants can be tailored to elicit specific types of immune responses. Furthermore, they can help overcome immunosenescence by boosting the immune response in older individuals.

Breakup by Application:

Research

Commercial

Research holds the maximum share in the market

A detailed breakup and analysis of the market based on the application have also been provided in the report. This includes research and commercial. According to the report, research accounted for the largest market share.

Vaccine adjuvants are critical components in the field of vaccine research, playing a pivotal role in enhancing the effectiveness and safety of vaccines. These substances are added to vaccine formulations to boost the immune response, ultimately leading to better protection against infectious diseases. Adjuvants are particularly valuable in the development of vaccines against pathogens that are challenging to target using traditional vaccine approaches, such as viruses with rapidly mutating surface proteins or weakly immunogenic components. They are indispensable tools in vaccine research, serving to enhance immune responses, reduce antigen doses, and fine-tune the specificity of the immune system's reaction. Furthermore, scientists are investigating novel adjuvant formulations and delivery methods to maximize their effectiveness while minimizing potential side effects.

## Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

North America exhibits a clear dominance, accounting for the largest vaccine adjuvants market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, North America accounted for the largest market share.

North America held the biggest market share due to increasing improvements in the healthcare sector to provide quality treatment to patients. Besides this, the increasing

focus on the development of various novel vaccines, therapeutics, and medications for the treatment of rare diseases is propelling the growth of the market. Apart from this, increasing improvements in the fields of biotechnology and immunology to enable the development of adjuvants with improved safety profiles and enhanced efficacy are supporting the growth of the market.

Asia Pacific is estimated to expand further in this domain due to the rising prevalence of numerous infectious diseases caused by novel viruses. Additionally, the increasing conduction of public awareness campaigns and educational efforts to promote the benefits of vaccination is bolstering the growth of the market.

#### Competitive Landscape:

Key market players are developing innovative and more effective adjuvants by exploring new adjuvant formulations, delivery mechanisms, and combinations with vaccines to enhance their efficacy and safety. They are also forming strategic partnerships and collaborations with vaccine manufacturers, biotech firms, and research institutions for sharing expertise and resources and accessing new markets. Top companies are expanding their product portfolios by developing adjuvants that can be used in various types of vaccines, including those for infectious diseases, cancer, and autoimmune disorders. They are also focusing on ensuring that their adjuvants meet the necessary regulatory requirements and safety standards. Leading companies are expanding their presence in emerging markets, where the demand for vaccines and vaccine adjuvants is growing. They are also establishing manufacturing facilities, distribution networks, and partnerships with local organizations.

The report has provided a comprehensive analysis of the competitive landscape in the market. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

Adjuvance Tecchnologies Inc.

Adjuvatis

Agenus Inc.

Brenntag SE

Chemtrade Logistics Inc.

CSL Limited

Croda International Plc

Invivogen

Novavax Inc.

OZ Biosciences

## Virometix AG

### Recent Developments:

In January 2022, Adjuvance Technologies Inc. announced the issuance of a U.S. patent covering semi-synthetic saponin adjuvants that exhibits improved adjuvant activity and reduced toxicity by the United States Patent and Trademark Office (USPTO).

In September 2021, Agenus Inc. announced the launch of its subsidiary, SaponiQx, which will drive innovation in novel adjuvant discovery and vaccine production.

In June 2023, Novavax Inc. announced the approval of the R21/Matrix-M™ malaria vaccine containing its Matrix-M, a saponin-based adjuvant by Agence Nationale de la Regulation Pharmaceutique (ANRP). Burkina Faso for use in children.

### Key Questions Answered in This Report

1. What was the size of the global vaccine adjuvants market in 2022?
2. What is the expected growth rate of the global vaccine adjuvants market during 2023-2028?
3. What are the key factors driving the global vaccine adjuvants market?
4. What has been the impact of COVID-19 on the global vaccine adjuvants market?
5. What is the breakup of the global vaccine adjuvants market based on the product type?
6. What is the breakup of the global vaccine adjuvants market based on route of administration?
7. What is the breakup of the global vaccine adjuvants market based on the diseases?
8. What is the breakup of the global vaccine adjuvants market based on the application?
9. What are the key regions in the global vaccine adjuvants market?
10. Who are the key players/companies in the global vaccine adjuvants market?



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