

cGAS STING Pathway Market - by Type, Molecule, Therapeutic Area, Route of Administration and Key Geographical Regions: Industry Trends and Global Forecasts, 2020-2030

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Abstracts

The cGAS STING pathway market is expected to reach USD 305 million in 2020 and anticipated to grow at a CAGR of 25% during the forecast period 2020-2030.

In recent years, considerable attention has been directed toward the cytosolic DNA sensing (cGAS-STING) pathway within the medical scientific community. This pathway presents a promising avenue for leveraging the immune system to address various clinical conditions, including oncological and autoimmune disorders, through pharmacological means. The manipulation of the STING pathway using modulators capable of either activating or suppressing it holds significant therapeutic potential. There are numerous such modulators developed, with more than 50 experimental interventions currently in progress for treating oncological, autoimmune, and inflammatory disorders. This growing interest is substantiated by the expanding body of scientific literature, with over 1,000 related articles on NCBI's PubMed since 2015. Additionally, substantial capital investments exceeding USD 2.6 billion from both public and private sectors have fueled product development in this area. Notably, several high-value technology licensing agreements have been made within the cGAS-STING pathway market since 2015. Consequently, there has been a surge in the establishment of companies dedicated to this field in the past 4-5 years, with major pharmaceutical players actively exploring multiple STING agonists/antagonists.

Moreover, recent molecular research into the pathogenesis of the novel SARS-CoV-2 virus suggests a potential association between COVID-19 and the STING pathway. This viral strain may induce a disorder related to STING, characterized by delayed over-

secretion of IFN- γ . Given the prominent expression of STING in human lung alveolar epithelial cells, endothelial cells, and spleen cells, which are crucial in COVID-19 pathogenesis, swift assessments of STING polymorphisms could assist in identifying individuals at high risk of severe infection. Furthermore, understanding the mechanisms behind the novel coronavirus-induced over-activation of the STING pathway may aid in the development of potential therapeutic candidates against COVID-19. Despite the absence of approved drugs or therapy products targeting the STING pathway currently available in the market, promising leads are expected to emerge over the next decade. Consequently, the market is forecasted to experience significant growth during this period.

Report Coverage

The report conducts an analysis of the cGAS STING pathway market, focusing on STING modulator types, therapeutic areas, administration routes, molecule types, and key geographic regions.

A comprehensive evaluation of factors impacting market growth, including drivers, restraints, opportunities, and challenges, is undertaken within the report.

It assesses the potential benefits and barriers in the market landscape and provides insights into the competitive environment for leading market players.

Revenue forecasts for market segments are provided across five distinct regions.

The report offers an extensive examination of the current therapeutic market related to the STING pathway. This includes analyzing STING modulator classifications, molecule types, developmental phases, targeted therapeutic areas, treatment types, administration routes, and treatment lines.

An in-depth analysis of the developer landscape is provided, encompassing details such as establishment year, company size, geographical locations, and an overview of ongoing clinical trials centered on the STING pathway.

The report explores the technology platforms utilized for developing STING modulators, categorizing them based on modulator type, molecular composition, and analyzing technology developers considering establishment year, company size, and geographic distribution.

Detailed profiles of key stakeholders involved in developing therapeutics targeting the STING pathway are provided based on the developmental phase of pipeline products. Each profile includes an overview of the company, financial information (if available), descriptions of leading drug candidates, recent advancements, and future outlook.

Elaborate industry player profiles are tabulated based on antagonist pipeline products, detailing innovator company information, establishment year, headquarters location, employee count, key executives, recent developments, and descriptions of respective drug candidates.

An analysis of grants awarded to research institutes involved in STING pathway projects between 2015 and Q1 2020 is conducted, considering parameters such as grant number, value, funding institutes, support periods, mechanisms, and recipient organizations.

The report examines major pharmaceutical companies engaged in developing therapeutics targeting the STING pathway, covering aspects like portfolio diversity, molecule types, developmental phases, targeted therapeutic areas, therapy types, and administration routes.

An analysis of start-ups and small players established within the last decade with fewer than 50 employees are conducted. Parameters such as portfolio diversity, molecule types, developmental phases, therapeutic areas, funding received, investor count, funding types, partnership activities, patent filings, grants received, and start-up health indexing are assessed.

A comprehensive analysis of over 300 peer-reviewed scientific articles published between 2019 and Q1 2020 is conducted, focusing on research trends within the industry, highlighting publication types, study objectives, popular keywords, targeted pathways, therapeutic areas, and leading publishers.

An analysis of partnerships established in the cGAS STING pathway market between 2015 and Q1 2020 is undertaken. This analysis covers various partnership types and examines patterns based on years, models, modulator types, therapeutic areas, technology platforms, and involved regions.

An analysis of investments made across different developmental stages by

companies engaged in the cGAS STING pathway market is performed. This includes evaluation of funding instances, invested amounts, funding types, modulator types, therapeutic areas, active players, investors, and geographical distribution.

Key Market Companies

Aduro Biotech

Bristol-Myers Squibb

Eisai

GlaxoSmithKline

ImmuneSensor Therapeutics

Merck

Noxopharm

Spring Bank Pharmaceuticals

Synlogic

STING Antagonist Developers

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