Single Cell Analysis Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028
Segmented By Product (Consumables v/s Instruments), By Technique (Flow Cytometry, Next Generation Sequencing, PCR, Microscopy, Mass Spectrometry, Other Techniques), By Application (Research Field, Medical Field), By End User (Academic & Research Laboratories, Biotechnology & Pharmaceutical Companies, Hospital & Diagnostic Laboratories, Cell Banks & IVF Centers), By Region and Competition

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Report description:

Global Single Cell Analysis market is anticipated to witness a growth of steady CAGR in the forecast period, 2024-2028. This can be ascribed to the increasing demand for the increasing prevalence of cancer across the globe and the growing development of technologies that have cascaded huge investments from life sciences companies and government funding initiatives for research activities. Also, the growing adoption of single-cell analysis products to understand the central dogma of molecular biology is one of the major factors which will further drive the growth of the market during the forecast period. In March 2021, researchers from The NHLBI LungMap Consortium and The Human Cell Atlas Lung Biological Network performed a single-cell meta-analysis in 1,320,896 cells from 228 humans to understand the entry genes of SARS-CoV-2 across the world.

Increasing Demand for Personalized Medicine

Personalized medicine is a rapidly growing field that aims to provide individualized treatment based on an individual's unique

genetic makeup. Single cell analysis plays a critical role in personalized medicine by allowing for the identification of rare cell populations and the analysis of individual cells at the molecular level. As personalized medicine becomes more widely adopted, there will be an increasing demand for tools and technologies that enable single cell analysis. Single cell analysis allows researchers and clinicians to analyze individual cells and identify molecular changes that may contribute to disease development or progression. This information can be used to develop personalized treatment strategies that target specific molecular pathways. Governments and private organizations are investing heavily in personalized medicine research, which includes the development of new single cell analysis tools and technologies. This funding is expected to drive innovation in the field and accelerate the development of new tools that are optimized for personalized medicine applications. Single cell analysis is being used in a growing number of applications beyond personalized medicine, such as cancer research, immunology, and neuroscience. As the technology becomes more widely adopted, there will be an increasing number of applications for single cell analysis, which will further drive the growth of the global single cell analysis market.

Advancements in Genomic and Proteomic Technologies

Genomic and proteomic technologies have had a significant impact on the growth of the global single cell analysis market. These technologies have enabled the analysis of individual cells at the molecular level, providing researchers and clinicians with valuable insights into cellular function and disease development. Genomic and proteomic technologies allow for the analysis of individual cells at a high level of resolution and sensitivity. For example, single cell RNA sequencing can detect gene expression changes in individual cells that would be missed by traditional bulk RNA sequencing. This increased resolution and sensitivity allow for the identification of rare cell populations and the analysis of individual cells, which is critical for personalized medicine and other applications. The growth of genomic and proteomic technologies has driven the development of new tools and technologies that are optimized for single cell analysis. For example, microfluidic devices and high-throughput sequencing platforms have been developed that enable the analysis of large numbers of individual cells in a single experiment. These tools are driving the growth of the global single cell analysis market by enabling researchers to perform experiments that were not possible before. Genomic and proteomic technologies have enabled the analysis of individual cells in a growing number of applications, such as cancer research, immunology, and neurobiology. As the technology becomes more widely adopted, there will be an increasing number of applications for single cell analysis, which will further drive the growth of the global single cell analysis market. Genomic and proteomic technologies are being integrated with other technologies, such as imaging and flow cytometry, to enable the analysis of multiple modalities in individual cells. This integration is driving innovation in the field and is expected to lead to the development of new tools and technologies that are optimized for multi-modal single cell analysis.

Rising Prevalence of Chronic Diseases

Chronic diseases, such as cancer, cardiovascular disease, and diabetes, are major drivers of the global single cell analysis market. Single cell analysis is increasingly being used in the study of chronic diseases to identify molecular changes that contribute to disease development and progression. The study of chronic diseases requires the analysis of individual cells to identify molecular changes that contribute to disease development and progression. As a result, there is an increasing demand for tools and technologies that enable single cell analysis. This demand is driving the growth of the global single cell analysis market. The growing demand for single cell analysis in the study of chronic diseases is driving the development of new tools and technologies that are optimized for the analysis of individual cells. For example, microfluidic devices are being developed that allow for the isolation and analysis of individual cells with high throughput and accuracy. These tools are critical for the success of chronic disease research and are expected to drive the growth of the global single cell analysis market. Single cell analysis is enabling researchers to identify new therapeutic targets for chronic diseases. By analysing individual cells, researchers can identify molecular changes that are specific to certain cell populations, which can lead to the development of targeted therapies that are more effective and have fewer side effects. Single cell analysis is playing a critical role in the development of personalized medicine for chronic diseases. By analyzing individual cells, researchers can identify molecular changes that are unique to an individual's disease, which can lead to the development of personalized treatment strategies that target specific molecular

pathways.

Increasing Government Funding for Life Sciences Research

Government funding plays a crucial role in the growth of the global single cell analysis market. Governments around the world provide funding for research and development in life sciences, including single cell analysis, to drive innovation and improve health outcomes. Governments provide research grants to academic and industry researchers to conduct research in life sciences, including single cell analysis. These grants can be used to fund the development of new tools and technologies, as well as to support research studies that aim to understand the underlying molecular mechanisms of disease. The availability of research grants is critical for the growth of the global single cell analysis market. Governments also invest in infrastructure to support research in the life sciences, including single cell analysis. This can include funding for the construction of research facilities, the purchase of equipment and supplies, and the development of data-sharing platforms. This infrastructure investment is critical for the growth of the global single cell analysis market because it enables researchers to conduct high-quality research and share data and resources with others in the field. Governments provide regulatory support to ensure that new tools and technologies developed for single cell analysis meet safety and efficacy standards. This regulatory support is critical for the growth of the global single cell analysis market because it ensures that new products are safe and effective for use in research and clinical applications. Governments also support public-private partnerships that aim to develop new tools and technologies for single cell analysis. These partnerships bring together academic researchers, industry partners, and government agencies to collaborate on research and development projects. The availability of funding for these partnerships is critical for the growth of the global single cell analysis market because it enables researchers and companies to work together to develop new products and technologies.

Recent Development

?□10x Genomics Chromium Single Cell ATAC Solution - This product was launched in 2019 and enables the analysis of chromatin accessibility at the single cell level. The technology uses the 10x Genomics Chromium platform to generate single cell ATAC-seq data, which can be used to study the epigenetic regulation of gene expression.
?□BD Rhapsody Single-Cell Analysis System - This system was launched in 2018 and enables the analysis of gene expression at the single cell level. The system uses microfluidic technology to isolate and capture individual cells, followed by mRNA sequencing using the BD Rhapsody platform.
?□Fluidigm C1 System - The C1 System from Fluidigm was launched in 2019 and enables the isolation and analysis of single cells for genomic and transcriptomic analysis. The system uses microfluidic technology to capture individual cells and prepare them for sequencing using the Fluidigm Biomark HD platform.
?□Takara Bio ICELL8 Single-Cell System - The ICELL8 System from Takara Bio was launched in 2018 and enables the isolation and analysis of single cells for transcriptomic analysis. The system uses microfluidic technology to capture individual cells and prepare them for sequencing using the SMART-seq2 protocol.
Market Segmentation
Global Single Cell Analysis market can be segmented by product, technique, application, end-user, region and competitive landscape. Based on product, the market can be divided into Consumables v/s Instruments. Based on technique, the market can be segmented into Flow cytometry, Next Generation Sequencing, PCR, Microscopy, Mass Spectrometry, and Other techniques. Based on application, the market can be divided into Research Field, Medical Field. Based on end-user, the market can be grouped into Academic & Research laboratories, Biotechnology & Pharmaceutical companies, Hospital & diagnostic laboratories, Cell banks & IVF Centers. Regionally, North America dominates the market among Asia Pacific, Europe, Middle East & Africa, and South America. Among the different countries, the United States dominates the global single cell analysis market on account of the increase in research and development investments by the pharmaceutical and biotechnology industries in the country.

Market Players
Thermo Fisher Scientific Inc., Becton, Dickinson and Company., Danaher Corporation., Merck KGAA., Qiagen N.V., 10X Genomics.,

Promega Corporation., Illumina., Bio-Rad Laboratories., Fluidigm Corporation., and Takara Bio Inc. are some of the leading players operating in the Global Single Cell Analysis Market.

Report Scope:

In this report, the Global Single Cell Analysis market has been segmented into the following categories, in addition to the industry trends, which have also been detailed below:

?□Single Cell Analysis Market, By Product:
o□Consumables
o□Instruments
?□Single Cell Analysis Market, By Technique:
o□Flow cytometry
o□Next-Generation Sequencing
o□PCR
o□Microscopy
o□Mass Spectrometry
o□Other techniques
?□Single Cell Analysis Market, By Application:
o□Research Field
o□Medical Field
?□Single Cell Analysis Market, By End User:
o□Academic & Research laboratories
o□Biotechnology & Pharmaceutical companies
o□Hospital & diagnostic laboratories
o□Cell banks & IVF Centers
?□Single Cell Analysis Market, By Region:
o□North America
?□United States
?□Canada
?□Mexico
o□Europe
?□France
?□Germany
?□United Kingdom
?□Italy
?□Spain
o□Asia Pacific
?□China
?□India
?□Japan
?□South Korea
?□Australia
o□South America
?□Brazil
?□Argentina
?□Colombia
o□Middle East & Africa
?□South Africa
?□Saudi Arabia

?UAE
Competitive Landscape
Company Profiles: Detailed analysis of the major companies present in the Global Single Cell Analysis Market.
Available Customizations:
With the given market data, TechSci Research offers customizations according to a company?s specific needs. The following customization options are available for the report:
Company Information
?Detailed analysis and profiling of additional market players (up to five).

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