

# Global Cell Based Assays Market by Growth, Industry Size, Trends, Shares, By Top Players, And Forecast 2033

*The cell-based assays market is on a trajectory of sustained growth, driven by technological innovation and the expanding use of biologics in healthcare.*

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/EINPresswire.com/ -- The global [Cell-Based Assays Market](#) is forecasted to grow from USD 18.21 billion in 2024 to USD 39.56 billion by 2033, achieving a robust compound annual growth rate (CAGR) of 9.00%, according to a recent analysis. Key factors propelling this growth include the increasing demand for biologics, advancements in drug discovery platforms, and the shift toward predictive cellular models.



## Rising Demand for Biologics Fuels Market Expansion

Biologics, including vaccines, gene therapies, and recombinant therapeutic proteins, are increasingly being used to treat a variety of diseases. This surge in biologics sales is a major driver for the growth of cell-based assays, which play a critical role in evaluating potency, safety, and biological similarity. For example, in 2021, biologics sales in Canada exceeded \$11 billion, highlighting the growing importance of these therapies.

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## Innovation in Drug Discovery Drives Growth

The pharmaceutical industry's need to minimize costly late-stage drug development failures has accelerated innovation in cell-based assay technologies. These assays provide vital insights during drug discovery, helping reduce risks and improve success rates. A Sigma analysis revealed

that late-stage failures could lead to a significant drop in return on investment, with rates potentially falling as low as 5%.

Major advancements in high-content systems and data analytics are enabling researchers to extract more detailed biological data, which aids in making informed decisions during drug development.

### Cutting-Edge Platforms Revolutionize Research

Leading companies in the market are leveraging technology to enhance drug discovery. For instance, Selvita, a Poland-based biotechnology firm, launched a novel cell-based phenotypic assay platform in February 2021. Designed to address neuroinflammatory and fibrotic diseases, this platform integrates high-content imaging and artificial intelligence to streamline drug profiling and accelerate research.

### Challenges Remain: Costs and Resource Demands

Despite its promising growth, the cell-based assays market faces challenges such as high costs and the resource-intensive nature of research. Developing and validating these assays requires significant investment in equipment, reagents, and skilled professionals, making them less accessible for smaller laboratories and research institutions.

This financial barrier may hinder market growth, particularly in regions with limited funding. Efforts to reduce costs and increase accessibility will be critical to ensuring the broader adoption of cell-based assays across various sectors.

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### Market Insights: Drug Discovery Leads the Way

The drug discovery segment remains the largest application category in the cell-based assays market, driven by increasing demand for new medications and substantial R&D investments. The rise in chronic diseases such as cancer, cardiovascular disorders, and diabetes has further fueled this segment's growth.

The basic research segment is also expected to grow significantly, as researchers continue to rely on cell-based assays to study disease mechanisms and identify potential therapeutic targets. This segment's expansion is tied to the growing prevalence of diseases requiring advanced research methods.

The cell-based assays market is on a trajectory of sustained growth, driven by technological innovation and the expanding use of biologics in healthcare. While challenges related to costs

and resources persist, advancements in predictive cellular models and drug discovery platforms promise to revolutionize the field, making cell-based assays an indispensable tool in medical research and drug development.

In January 2023, Charles River Laboratories purchased SAMDI Tech, which provides label-free HTS solutions for drug discovery research. The acquisition provided CRL with experience in label-free HTS MS platforms and resulted in a broad library of drug discovery options.

Some of the key companies in the global Cell-Based Assays market include:

BD  
Thermo Fisher Scientific Inc.  
Danaher Corporation  
Merck KGaA  
Agilent Technologies, Inc.  
Lonza  
Charles River Laboratories  
Bio-Rad Laboratories, Inc.  
Revvity  
Sartorius AG  
Corning Incorporated  
Promega Corporation  
Cell Signaling Technology, Inc  
Eurofins Scientific  
Enzo Biochem, Inc.  
Carna Biosciences, Inc.  
Intertek Group pic  
BICO  
Cell Biolabs, Inc  
Reaction Biology  
AAT Bioquest, Inc.  
Pestka Biomedical Laboratories, Inc.  
Neuromics  
BPS Bioscience, Inc.  
BellBrook Labs  
Profacgen  
BMG LABTECH  
Hanugen Therapeutics  
Altogen Labs  
BioAgilytix

Cell-Based Assays Latest Industry Updates

In April 2024, BD introduced the BD FACSDiscover S8 Cell Sorters to help researchers broaden their study into areas such as cell biology, cancer research, and immunology.

In October 2023, Danaher Corporation (Beckman Coulter Life Sciences) teamed with 10x Genomics to expand automation solutions for single-cell test workflows.

In February 2023, Agilent Technologies, Inc. introduced the CELLigence RTCA HT (real-time cell analysis high throughput) platform, which is compatible with the BioTek BioSpa 8 Automated Incubator.

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## Cell-Based Assays Market Segmentation Analysis

By Offering Outlook (Revenue, USD Million; 2020-2033)

Consumables

Reagents

Assay Kits

Reporter Gene Assays

Cell Growth Assays

Second Messenger Assays

Cell Death Assays

Other Assay Kits

Microplates

Cell Lines

Immortalised Cell Lines

Primary Cell Lines

Stem Cell Lines

Probes & Labels

Other Consumables

Instruments

Software

Services

By Technology Outlook (Revenue, USD Million; 2020-2033)

Flow Cytometry

High Throughput Screening

Label-free Detection

Other Technologies

By Application Outlook (Revenue, USD Million; 2020-2033)

Drug Discovery  
Toxicity Studies  
Pharmacokinetic Studies  
Pharmacodynamic Studies  
Basic Research  
Genetic Studies  
Other Applications

By End User Outlook (Revenue, USD Million; 2020-2033)

Pharmaceutical & Biotechnology Companies  
Contract Research Organizations (CROs)  
Academic & Research Institutes

By Geography Outlook (Revenue, USD Million; 2020-2033)

North America  
United States  
Canada  
Mexico  
Europe  
Germany  
France  
United Kingdom  
Italy  
Spain  
Benelux  
Rest of Europe  
Asia-Pacific  
China  
India  
Japan  
South Korea  
Rest of Asia-Pacific  
Latin America  
Brazil  
Rest of Latin America  
Middle East and Africa  
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