

Protein Labeling Market Size Trends Demand and Growth 2023-2030

Protein Labeling Market Expected to reach a high CAGR of 6.4% By 2030:

CLEVELAND, OHIO, USA, December 27, 2022 /EINPresswire.com/ -- Market Overview:

Several products, such as reagents, kits, and services, are being launched and used widely by research laboratories, hospitals, or others to diagnose chronic diseases like cancer



or neurodegenerative disorders. Protein labeling is in high demand due to the increasing number of genomic and proteomic research, huge investments in research and development, and a high rate of product launches. Stable isotopes, mass tags, and fluorophores are three major tags utilized during protein labeling. Immunohistochemistry, Western blotting, ELISA, flow

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Protein Labeling Market Expected to reach a high CAGR of 6.4% By 2030:" DataM Intelligence cytometry, and immunocytochemistry demand protein labeling methods for several medical and clinical studies.

Market Size Growth Rate:

According to the research report by DataM Intelligence, the global protein labeling market size was valued at USD YY

billion in 2021; it is projected to reach USD YY billion by 2029, with growth at a CAGR of 6.4% over the forecast period 2022-2029.

Biological research utilizes molecular labels covalently adhered to the protein of interest to provide the labeled protein and its imperative partner's detection or purification. The major purpose of protein labeling is surveillance of the biological process, dependable analysis of compounds, detection of particular protein isoforms or modifications in multiplexed samples, increasing detection sensitivity, and streamlined detection workflows. Along with novel product launches and technological advances, the rising demand for protein labeling, owing to rising chronic disorders, will further support market trends for protein labeling through 2029.

Market Drivers:

The rising adoption of protein labeling products for studies of post-translational modification in biological functions investigation and determination of normal cell functioning, increasing sophisticated bioengineering techniques adoption in numerous technologies, and the surge in the incidence of chronic diseases like cancer, the requirement for diagnosis enhances the protein labeling market. They are increasing R&D activities in several healthcare companies to develop novel products. There is a high need for protein labeling in protein microarrays and cell-based assays for diagnosis purposes. The global market for protein labeling has attractive potential due to the rise in the frequency of novel product launches and high investment in research and development in emerging nations.

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Market Restraints:

The limited product applications and the limited number of experienced professionals in the current scenario hamper the market for global protein labeling. Rising competition between the key players for advanced product launches may hinder the market's growth. The high cost of protein labeling is due to the disadvantages of chemical labeling, as sometimes the modified protein loses one or more activities. So, the activity of the labeled protein is first tested relative to the unlabeled protein. Purification is required in metabolic labeling of the radioactive protein, and it gets difficult to have radioactivity over the extended usage of centrifuges and several cold room equipment.

Market Opportunities:

Research and medical experts are developing advanced approaches to improve the outcomes of protein labeling. The major area of research is the latest technological advancements, such as improved technologies providing better or improved efficacy and results, fewer negative effects, and new product launches. Increasing government organization funding in healthcare sectors is boosting the market. Growing investments is helping end-users use novel technologies. Infrastructure development and rising investments are expected to provide huge opportunities for the protein labeling market. This will provide a lucrative opportunity for the growth of the market.

COVID-19 Impact Analysis:

The health system is under extreme strain due to the COVID-19 pandemic. Prioritizing treating patients with chronic diseases such as cancer or neurogenic disorders and many more, increasing the use of suitable protein labeling for ELISA, western blotting, immunocytochemistry, immunohistochemistry, and flow cytometry, enhancing the number of products with more

efficacy, and advancing technology for better diagnosis are a few ways that need to be reorganized in terms of priorities.

Recent Developments in the Industry:

1. In April 4, 2022, PerkinElmer, Inc., a company determined to innovate for a healthier world, announced its two novel products, HTRF and AlphaLISA no-wash ready-to-use assay kits developed to quantify or detect CHO HCP impurities amongst biopharmaceutical manufacturing quickly and easily. Recombinant therapeutic proteins, like monoclonal antibodies, a few vaccines, and other biologics, should be residual host cell protein (HCP) impurities free for immunogenicity prevention or minimized stability, potency, or overall efficacy of a drug.

2. In November 14, 2022, Agilent Technologies Inc. announced the AssayMAP Bravo protein sample prep workbench 4.0 software release. This release increases 21 CFR Part 11 compliance-enabling properties that provide preparation of AssayMAP bravo-based automated samples in workflows across the biopharma drug development process.

Market Segmentation:

According to the research analysis, the global protein labeling market is segmented by product type as kits, reagents, and services. By labeling type, the market is bifurcated into in-vitro, in-vivo, and bio-orthogonal. The market is further segmented by application into the cell-based assay, immunological techniques, protein microarrays, mass spectroscopy, and fluorescence microscopy. The market is divided into hospitals, research laboratories, diagnostic centers, and home care by end-user.

1. Based on the application, the cell-based assay segment accounted for the largest market share of around XX% in 2021 and is expected to grow at a CAGR of 6.4% during the forecast period (2022-2029). Cell-based assays analyze the compound's effectiveness in a cellular environment, which is important to understand the behavior of compounds in a biological system and associate readouts with a translatable biomarker. The cell-based assays are crucial for determining cell health, proliferation, viability, migration, chemotaxis, invasion, and apoptosis. These analyses are essential experimental tools in biomanufacturing and life science research. Major key players are researching and developing several advanced novel technologies and product launches. It is also anticipated that rising chronic disease incidences and FDA product approvals will fuel the global market expansion.

Geographical Classification:

The global protein labeling market is segmented into major regions: North America, South America, Europe, Asia Pacific, and the Middle East & Africa.

North America Protein Labeling Market:

This large revenue share is mainly due to the rising investments in research and development and the abundance of highly qualified researchers, among other things. North America is one of the biggest markets for protein labeling. This region showcases a significant CAGR owing to the rising adoption of these labels for studies of post-translational modification in biological functions and normal cell functioning determination and the growing number of advancements combined with the increasing demand for protein labeling. The significant market share is attributable to the high disease knowledge in the area and the numerous programs initiated to increase awareness about chronic diseases where these protein labelings are crucial for the diagnostic purpose for several tests like western blotting, immunohistochemistry, ELISA, immunocytochemistry, which have expanded the market for these novels and advanced protein labeling.

Due to the region's growing chronic disease cases and the increasing number of research in genome sequencing and proteomics, which is driving up demand for protein labeling for cellbased assay, protein microarrays, immunological techniques, and fluorescence microscopy, Asia Pacific is predicted to have the quickest increase throughout the analyzed period. By 2029, Japan's market for protein labeling is anticipated to be worth over yy million dollars. Due to numerous aspiring industry players in the area, the China protein labeling market is predicted to provide a CAGR of around 6.4% percent, accounting for revenue generation of over USD yy billion by the conclusion of the projected year.

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Competitive Analysis:

However, it is expected to grow rapidly in the next couple of years with intense competition among the players and a rising number of cases. A few key players are already being observed adopting strategies, such as collaboration for developing novel technologically advanced products, which may make the market crowded with new products in the next couple of years.

Major Companies:

Major key companies contributing to the market's growth are Thermo Fisher Scientific, New England Biolabs, Merck KGaA, GE Healthcare, PerkinElmer Inc., Qiagen N.V., Promega Corporation, SeraCare Life Sciences Inc., Bio-Rad Laboratories, Inc., and Agilent Technologies.

Additional Benefits Post Purchase:

- 1) Unlimited Analyst support for a period of 1 year.
- 2) Any query concerning the scope offered will be addressed within 24-48 hours.
- 3) An excel sheet with market numbers will be provided separately.

The Full Report has the following insights:

• The report comprehensively evaluates the market in terms of Market Value (US \$) and Y-o-Y Growth Rates (%). It does so via in-depth qualitative insights, historical data (2020-2021), and verifiable projections about market size during the forecast period (2022-2029).

• Visualize the composition of the global protein labeling market segmentation by product type, labeling type, application, end-user, and region, highlighting the key commercial assets and players.

o By Product Type: Kits, Reagents, and Services

o By Labeling Type: In-Vitro Labeling, In-Vivo Labeling, and Bio-orthogonal Labeling

o By Application: Cell-Based Assay, Immunological Techniques, Protein Microarrays, Mass Spectroscopy, and Fluorescence Microscopy

o By End-User: Hospitals, Research Laboratories, Diagnostic Centers, and Others

o By Region: North America, South America, Europe, Asia Pacific, and the Middle East & Africa

• Identify global protein labeling market commercial opportunities by analyzing trends and codevelopment deals.

• The report also covers data insights on various industry forces such as porter's five forces analysis, supply chain analysis, and pricing analysis.

• Excel data sheet with thousands of global protein labeling market-level 4/5 segmentation data points.

• PDF report with the most relevant analysis cogently put together after exhaustive qualitative interviews and in-depth market study.

• Product mapping in excel for the key product of all major market players

• The report will provide access to approximately 61 market data tables, 64 figures, and close to 180 pages.

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