

# Nucleic Acid Labeling - Global Market Outlook (2020-2028)

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# Abstracts

According to Stratistics MRC, the Global Nucleic Acid Labeling market is accounted for \$2,114.25 million in 2020 and is expected to reach \$4,768.02 million by 2028 growing at a CAGR of 10.7% during the forecast period. Some of the key factors propelling the market growth include increasing healthcare expenditure, increase in research and development expenditure, rise in research activities specifically in genomic research and disease diagnosis, advancements in tools for synthetic genome design, and growing demand for personalized medicine. However, lack of skilled professionals in transcriptomics is restraining the market growth.

Labeling of nucleic acids is required for multiple studies proposing to elucidate their functions and dynamics in vitro and in cells. Nucleic acids can be transformed with labels that enable their detection or purification. The resulting nucleic acid probes can be used to recognize or recover other interacting molecules. Common labels used to produce nucleic acid probes include radioactive phosphates, biotin, fluorophores, and enzymes. There are several chemical and enzymatic methods prepared for labeling nucleic acids, such as the incorporation of fluorescent tags, radioactive phosphates, and modifications with biotin, which are essentially utilized in biotechnology applications. The labeled nucleic acid is used for purposes including PCR, FISH, blotting, microarrays, DNA sequencing, and in situ hybridization.

By product, biotin-based segment is expected to be the fastest-growing segment during the forecast period, due to increased stability and their non-hazardous nature. The biotin-based labels use non-toxic materials and have faster detection rates than radioactive probes. Furthermore, owing to their long half-life and high stability, biotin-based probes can be prepared in bulk and stored at -20°C for repeated uses. There have been several advancements in biotin-based techniques, such as the addition of



long tails of biotinylated nucleotides through enzymatic methods to counter the technique's limitations.

On the basis of geography, the Asia Pacific market is expected to expand at the fastest growth rate during the forecast period, due to the emergence of local players and the increasing penetration of key players in the Asia Pacific region. The emerging companies are tapping on the opportunities by providing a wide array of labeling solutions in developing nations. Moreover, an increase in the number of inter-regional collaborations among key entities has been witnessed in this region, further propelling the market growth. These collaborations are largely being targeted towards the enhancement of nucleic acid profiling services and genomic research across the Asia Pacific countries.

Some of the key players in Nucleic Acid Labeling Market include GE Healthcare, Promega Corporation, Agilent Technologies, Inc., Thermo Fisher Scientific Inc., Enzo Biochem Inc., New England Biolabs, PerkinElmer, Inc., F. Hoffmann La-Roche AG, Merck KGaA, Vector Laboratories Inc., Marker Gene Technologies Inc., VWR International, LLC, LubioScience GmbH, Helix OpCo LLC, and Interchim.

Labeling Techniques Covered:

**Random Primer** 

Nick Translation

In Vitro Transcription

End Labeling

**Reverse Transcription** 

**Terminal labeling** 

Products Covered:

Services

Reagents & Kits



Instruments

Applications Covered:

Southern & Northern Blotting

Microarray

Fluorescence in Situ Hybridization (FISH)

In Situ Hybridization

Deoxyribonucleic Acid (DNA) Sequencing

Polymerase Chain Reaction (PCR)

Oligonucleotide Labeling

**Cellular Localization** 

End Users Covered:

**Research Centers** 

**Diagnostic Centers** 

Academic & Research Institutes

Contract Research Organizations

Pharmaceutical & Biotechnology Companies

Hospitals/Clinics

Therapeutics



Laboratory

**Testing Institutions** 

Treatment Types Covered:

On-Demand

Prophylactic

Types Covered:

Ribonucleic Acid (RNA) Labeling

Deoxyribonucleic Acid (DNA) Labeling

Methods Covered:

Chemical-Based

Enzyme-Based

Sales Channels Covered:

Distributor

**Direct Sales** 

**Regions Covered:** 

North America

US



#### Canada

Mexico

# Europe

Germany

France

Italy

UK

Spain

#### Rest of Europe

#### Asia Pacific

Japan

### China

#### India

Australia

New Zealand

## South Korea

#### **Rest of Asia Pacific**

South America

#### Argentina

#### Brazil



Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2019, 2020, 2021, 2025 and 2028

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic analysis: Drivers and Constraints, Product/Technology Analysis, Porter's five forces analysis, SWOT analysis, etc.

Strategic recommendations in key business segments based on the market estimations

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SWOT Analysis of key players (up to 3)

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Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances



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