+357 96 030922
info@marketpublishers.com

Global Alcohol Dehydrogenases for Chiral Catalysis Supply, Demand and Key Producers, 2026-2032

https://marketpublishers.com/r/G498669E06DFEN.html
Date: June 2026
Pages: 100
Price: US$ 4,480.00 (Single User License)
ID: G498669E06DFEN

Abstracts

The global Alcohol Dehydrogenases for Chiral Catalysis market size is expected to reach $ 223 million by 2032, rising at a market growth of 6.6% CAGR during the forecast period (2026-2032).

Alcohol dehydrogenases for chiral catalysis are oxidoreductase enzymes used in stereoselective synthesis, typically operating with NAD(H)- or NADP(H)-based cofactor systems. They catalyze reversible transformations among alcohols, aldehydes, and ketones, and are particularly valuable in chiral catalysis for the enantioselective reduction of prochiral ketones into optically active chiral alcohols. Owing to their strong substrate recognition, stereocontrol, and compatibility with greener synthetic routes, these enzymes are widely applied in the preparation of pharmaceutical intermediates, key chiral building blocks for active pharmaceutical ingredients, fine chemicals, and specialty chemicals. Their upstream inputs mainly include enzyme gene resources, engineered microbial strains, fermentation media, expression systems, cofactors and cofactor-regeneration systems, stabilizers, and purification materials, while downstream customers mainly include pharmaceutical intermediate manufacturers, API process developers, fine chemical producers, industrial biocatalysis solution providers, and research institutions. The overall industry gross margin for alcohol dehydrogenases used in chiral catalysis is conservatively estimated at approximately 45%–60%.

Alcohol dehydrogenases for chiral catalysis are moving from laboratory validation toward broader industrial adoption, especially in pharmaceutical intermediates, key chiral building blocks for active pharmaceutical ingredients, and high-value fine chemical synthesis. Compared with conventional chemical reduction routes, they offer strong advantages in stereoselectivity, milder operating conditions, and greener manufacturing compatibility. The supply structure is also becoming more diversified,

+357 96 030922
info@marketpublishers.com

with standardized enzyme preparations, screening kits, customized enzyme engineering, and scale-up services developing in parallel. Customer demand is gradually shifting from isolated enzyme procurement toward integrated biocatalytic solutions that can be directly embedded into synthetic process development.

Future market development will increasingly depend on enzyme engineering, broader substrate compatibility, and the industrial realization of more challenging asymmetric reductions. Recent research and commercial practice indicate that alcohol dehydrogenases are becoming more capable of handling structurally complex ketones, sterically hindered substrates, and products requiring stricter stereochemical control. Protein engineering, directed evolution, and structure-guided optimization are expected to further improve catalytic activity, selectivity, and robustness. As enzyme libraries expand and screening efficiency improves, alcohol dehydrogenases are likely to enter additional reaction spaces that previously relied more heavily on metal catalysis or longer synthetic sequences.

The main growth drivers come from sustained demand for greener synthetic routes, lower by-product generation, and higher stereochemical purity in pharmaceuticals and fine chemicals. At the same time, the maturation of supporting technologies, including cofactor recycling, enzyme immobilization, continuous processing, and multi-enzyme cascade design, is making alcohol dehydrogenases more practical in industrial manufacturing. Competitive advantage will increasingly rest on a supplier's ability to deliver an end-to-end technical package, covering rapid enzyme screening, cofactor-system design, process robustness, and successful transfer from laboratory development to pilot and manufacturing stages.

Even so, several barriers remain. Alcohol dehydrogenase performance is often highly sensitive to substrate structure, cofactor preference, solvent environment, and reaction equilibrium, which means many projects still require case-by-case screening and enzyme optimization rather than straightforward standardization. Cofactor cost, recycling efficiency, stability under high substrate loading, and redox balance control continue to affect scale-up economics. Over time, market share is likely to become more concentrated among companies with deeper protein-engineering capabilities, stronger process-development experience, and richer customer project databases, while business models relying only on generic enzyme sales may face increasing pressure.

This report studies the global Alcohol Dehydrogenases for Chiral Catalysis demand, key companies, and key regions.

+357 96 030922
info@marketpublishers.com

This report is a detailed and comprehensive analysis of the world market for Alcohol Dehydrogenases for Chiral Catalysis, and provides market size (US$ million) and Year-over-Year (YoY) growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Alcohol Dehydrogenases for Chiral Catalysis that contribute to its increasing demand across many markets.

Highlights and key features of the study
Global Alcohol Dehydrogenases for Chiral Catalysis total market, 2021-2032, (USD Million)
Global Alcohol Dehydrogenases for Chiral Catalysis total market by region & country, CAGR, 2021-2032, (USD Million)
U.S. VS China: Alcohol Dehydrogenases for Chiral Catalysis total market, key domestic companies, and share, (USD Million)
Global Alcohol Dehydrogenases for Chiral Catalysis revenue by player, revenue and market share 2021-2026, (USD Million)
Global Alcohol Dehydrogenases for Chiral Catalysis total market by Type, CAGR, 2021-2032, (USD Million)
Global Alcohol Dehydrogenases for Chiral Catalysis total market by Application, CAGR, 2021-2032, (USD Million)

This report profiles major players in the global Alcohol Dehydrogenases for Chiral Catalysis market based on the following parameters - company overview, revenue, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Codexis, Almac Group, Prozomix, Johnson Matthey, Evoxx Technologies, Amano Enzyme, Zhejiang Syncozymes Bio-pharmaceutical, Asymchem, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the world Alcohol Dehydrogenases for Chiral Catalysis market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US$ Millions), by player, by regions, by Type, and by Application. Data is given for the years

+357 96 030922
info@marketpublishers.com

2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Alcohol Dehydrogenases for Chiral Catalysis Market, By Region:

- United States
- China
- Europe
- Japan
- South Korea
- ASEAN
- India
- Rest of World

Global Alcohol Dehydrogenases for Chiral Catalysis Market, Segmentation by Type:

- Enzyme Screening Kits
- Individual Enzyme Preparations
- Other

Global Alcohol Dehydrogenases for Chiral Catalysis Market, Segmentation by Cofactor Dependence:

- NAD-dependent Enzymes
- NADP-dependent Enzymes
- Other

+357 96 030922
info@marketpublishers.com

Global Alcohol Dehydrogenases for Chiral Catalysis Market, Segmentation by Application:

Pharmaceutical Intermediates

Fine Chemicals

Other

Companies Profiled:

Codexis

Almac Group

Prozomix

Johnson Matthey

Evoxx Technologies

Amano Enzyme

Zhejiang Syncozymes Bio-pharmaceutical

Asymchem

Key Questions Answered
1. How big is the global Alcohol Dehydrogenases for Chiral Catalysis market?
2. What is the demand of the global Alcohol Dehydrogenases for Chiral Catalysis market?
3. What is the year over year growth of the global Alcohol Dehydrogenases for Chiral Catalysis market?
4. What is the total value of the global Alcohol Dehydrogenases for Chiral Catalysis market?

+357 96 030922
info@marketpublishers.com

5. Who are the Major Players in the global Alcohol Dehydrogenases for Chiral Catalysis market?
6. What are the growth factors driving the market demand?

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

3 WORLD ALCOHOL DEHYDROGENASES FOR CHIRAL CATALYSIS COMPANIES COMPETITIVE ANALYSIS

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

6 MARKET ANALYSIS BY COFACTOR DEPENDENCE

7 MARKET ANALYSIS BY APPLICATION

+357 96 030922
info@marketpublishers.com

8 COMPANY PROFILES

+357 96 030922
info@marketpublishers.com

9 INDUSTRY CHAIN ANALYSIS

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global Alcohol Dehydrogenases for Chiral Catalysis Supply, Demand and Key Producers, 2026-2032

Product link: https://marketpublishers.com/r/G498669E06DFEN.html

Price: US$ 4,480.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/G498669E06DFEN.html