

# **Antifreeze Proteins Market by Type (Type I, Type III, Antifreeze Glycoproteins), End-use (Medical, Cosmetics, Food), Source (Fish, Plants, Insects), Form, and Region(North America, Europe, Asia Pacific, South America, RoW) - Global Forecast to 2028**

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## **Abstracts**

According to MarketsandMarkets, the antifreeze proteins market size is estimated to be valued at USD 10 million in 2023 and is projected to reach USD 50 million by 2028, recording a CAGR of 37.2% in terms of value. Antifreeze proteins is derived from the different parts of marine animals, plants, and insects. Recent studies and innovations in the antifreeze proteins market have proved and developed the wide applications of these proteins for health benefits and better bioavailability. The global antifreeze proteins industry has witnessed growth trends in the last five years, owing to several innovations and developments in raw materials and their extraction technologies. An increase in the consumption of processed and health-based food products has been driving the antifreeze proteins market.

“By type, Type I is the largest segment during the forecast period.”

Type I is the most abundantly used type of antifreeze protein. Type I collagen has multiple functionalities, it acts as a great supplement for minimizing fine lines and wrinkles along with strengthening skin elasticity and hydration. The best sources for the extraction of type I antifreeze proteins include fish skin and scales. Apart from being a rich source of protein, it also helps heal wounds and prevents signs of skin aging. The key players in the market offering type I antifreeze proteins during the study period.

“By form, the solid segment is expected to grow at the highest growth rate during the forecast period.”

The solid form of antifreeze proteins is very easy to store and use, additionally, this form of antifreeze proteins helps to increase longevity. Solid antifreeze proteins dominate the market due to this reason and it is used in medical, food, and other end-use applications.

“By end use, the food segment is projected to grow at a significant CAGR in the antifreeze proteins markets.”

Frozen foods have become one of the prominent methods of food preservation. Most of the ready-to-eat and processed food, go through many processes which may help preserve its taste and nutritive value, but the ice crystals can reduce its shelf life. Antifreeze proteins help in reducing the ice crystal formation on this food, thus helping improve its shelf-life and longevity.

“By source, the fish segment is projected to dominate the antifreeze proteins markets.”

The nutritional benefits of fish antifreeze proteins are plenty due to the presence of proteins, unsaturated essential fatty acids, minerals, and vitamins. On account of these factors, fish antifreeze proteins is widely used in the medical, nutraceutical, and cosmetic industries. However, due to high cost of extraction, customers are switching towards other different sources of antifreeze proteins.

“Asia Pacific market is estimated to be the fastest-growing region in the antifreeze proteins market.”

Asia Pacific is poised to be the fastest-growing region in the antifreeze proteins market during the forecast period. Several factors contribute to this growth, the region is experiencing rapid urbanization, along with rising disposable incomes and a growing middle class, leading to increased consumer spending. The market in the region includes countries such as China, Japan, India, Indonesia, Thailand, and Australia. The consumption of processed fruits and vegetables is higher than fresh alternatives. Apart from this, the growing urban and aging population is also contributing to the growth of the market in the region. The expanding e-commerce landscape in the Asia Pacific provides convenient access to a wide variety of personal care products like medical and cosmetics, bolstering market growth in the region.

## Breakdown of Primaries:

In-depth interviews were conducted with various key industry participants, subject-matter experts, C-level executives of key market players, and industry consultants, among other experts, to obtain and verify critical qualitative and quantitative information, as well as to assess future market prospects. The distribution of primary interviews is as follows:

By Company Type: Tier 1: 30%, Tier 2- 45%, Tier 3- 25%

By Designation: CXOs- 25%, Managers- 50%, Executives- 25%

By Region: Asia Pacific- 40%, Europe- 25%, North America- 24%, and RoW - 10%

Key players in this market include Nichirei Corporation. (Japan), Kaneka Corporation (Japan), A/F Protein Inc. (US), Sirona Biochem (Canada), Unilever (Netherlands), ProtoKinetix, Inc. (US), Shanghai Yu Tao Industrial Co., Ltd. (China), Koderia Herb Garden Co., Ltd (Japan), Beijing Huacheng Jinke Technology Co., Ltd. (China), Rishon Biochem Co., Ltd (China), and MyBiosource, Inc. (US)

## Reasons to buy this report:

The report will help the market leaders/new entrants with information on the closest approximations of the revenue numbers for the overall antifreeze proteins market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market's pulse and provide them with information on key market drivers, restraints, challenges, and opportunities.

## The report provides insights on the following pointers:

Analysis of key drivers (Rising awareness of benefits associated with antifreeze proteins, Advancements in technology to enhance fish farming in cooler climates, and Uses of antifreeze proteins as effective chemical adjuvants in cryosurgery), restraints (High cost of production and R&D expenditure and Market consolidation limiting free entry for new players), opportunities (Increase

in investments in R&D and innovations to strengthen demand for antifreeze proteins and Emerging markets in developing regions offering growth opportunities), and challenges (Limited use in food applications and Adverse effects of vegan trend on antifreeze proteins from animal sources) influencing the growth of the antifreeze proteins market

**Product Development/Innovation:** Detailed insights on coming technologies, R&D activities, and product launches in the antifreeze proteins market.

**Market Development:** Comprehensive information about lucrative markets – the report analyses the antifreeze proteins market across varied regions.

**Market Diversification:** Exhaustive information about new products, untapped geographies, recent developments, and investments in the antifreeze proteins market.

**Competitive Assessment:** In-depth assessment of market shares, growth strategies, and service offerings of leading players like, Nichirei Corporation. (Japan), Kaneka Corporation (Japan), A/F Protein Inc. (US), Sirona Biochem (Canada), and others in the antifreeze proteins market.

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