



Helix Biotech Ltd.

Helix Biotech Ltd. is a young, innovative, all-Canadian manufacturer and supplier of biological products. Operating on both a product retail and contract service basis, Helix Biotech Ltd. has developed the technology to supply researchers with a variety of protein biochemistry and immunological research products and services. Over the past two years, the company has embarked on an extensive research and development program which has brought some exciting new products to the Canadian biotechnology scene.

PURIFIED PROTEINS AND ANTIBODIES

Located in Richmond B.C., just south of Vancouver, Helix Biotech Ltd. has been a Canadian leader in the development of enzyme immunoassay products and systems. Drawing upon their expertise in protein chemistry, the company also offers a selection of highly purified human proteins. These include C-reactive protein, epidermal keratin, prostatic acid phosphatase, thyroid binding globulin and liver ferritin. Some of these have not previously been commercially available in North America. Antibodies against these proteins have been developed for use in the detection of inflammatory diseases, cancer detection and monitoring of liver and thyroid function.

ENZYME-ANTIBODY CONJUGATES

At the heart of the company's success has been their continuing commitment to research, and their policy of providing state-of-the-art biological products on a commercial scale. An example of this is the company's line of enzyme-antibody conjugates. All of the conjugates are prepared with advanced bifunctional reagents that prevent antibodies or enzymes from forming homopolymers e.g. antibody-antibody conjugates. This technology allows them to prepare "2nd generation" conjugates at low prices due to the higher retention of activity and decreased use of expensive, highly purified proteins. Further, all antibodies are affinity purified i.e. adsorbed to immobilized antigen and then eluted to yield highly purified, active preparations. For example, the company has prepared Mouse IgG F(ab')₂ fragments that have been used as antigens to produce second antibodies that will recognize all subclasses of Mouse IgG

equally. When these second antibodies are conjugated to enzymes in the popular GAMF-AP product (Alkaline Phosphatase conjugated to Goat-Anti-Mouse-F(ab')₂) they provide an indispensable system for the screening of monoclonal antibodies.

RESEARCH AND DEVELOPMENT

Projects in progress include reagents and techniques for steroid immunoassay. These assays have proven remarkably difficult to produce in the past due to the fact that most steroids are too small to elicit an immune response. They must be coupled to a carrier molecule prior to immunization. Secondly, non-specific antibodies (which recognize the chemical linkage but not the steroid itself) often need to be removed by affinity purification. Finally, there is generally a serious cross reaction of the antibody with closely related steroids. Work is underway to counter this cross-reaction by a recently developed pre-injection technique that blocks the production of non-specific antibodies. These problems are under control and various steroid antibodies should be available later this year.

Helix Biotech Ltd.'s reputation of quality service and a serious commitment to research has allowed them to enter into research contracts with the U.S. Fish and Wildlife Service, Fisheries and Oceans Canada, Agriculture Canada, the British Columbia Science Council, major North American biochemical distributors and a variety of other public and private organizations. Some of these important projects are: development of diagnostic kits for two major salmon bacterial diseases, an on-farm early pregnancy test for cattle and an immunoassay system for the early sexing of salmonid fish.

SERVICES

Apart from major contracts and retail sales, Helix Biotech Ltd. offers a variety of services to the biochemist or biologist. Drawing from their resource of research facilities and experience, they have the ability to help the researcher or laboratory in areas such as preparation of affinity medium, enzyme-immunoassay development, protein purification and characterization, electrophoretic screening for population genetics and preparation of custom antibodies, antisera or enzyme-antibody conjugates.

Helix Biotech Ltd. is located at No. 217-7080 River Road, Richmond, B.C. V6X 1X5. Telephone (604) 270-7468. Telex: 04-507672 (Answer back TASCO-VCR) Cable: HEBIOTECH. As a manufacturer of biological products, Helix Biotech Ltd. is keen to learn about your needs. Please call the president, Terrance G. Owen, Ph.D., at any time to discuss your requirements.

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