

**SERVICE FACILITY
Custom Antibodies**



Contact Us

For more information
about the services
offered by

**NRC-BRI's Custom
Antibodies Facility**

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The **NRC-BRI's Custom Antibody Facility** provides expertise and high-quality production of monoclonal and polyclonal antibodies for Canadian and international clients and partners. We serve a variety of research and development fields including health, agriculture and environmental science.

Our facility offers standard immunization protocols for the development of polyclonal antibodies in rabbits, and customized immunization and screening protocols for the production of mouse or rat hybridomas. We are currently upgrading our capacity to provide high-throughput generation of monoclonal antibodies. Generally, the customer supplies the antigen, although the NRC-BRI Peptide Synthesis Facility can prepare it according to client's needs. The lab's combination of services, equipment and expertise is distinctive in Canada.

At a Glance

The **Monoclonal Antibody Facility** integrates extensive knowledge in the production of monoclonal antibodies against a variety of antigens such as peptides, purified proteins, whole cells, membranes, carbohydrates and small molecules. We invite clients to discuss their needs and how they intend to use the antibodies in order to establish strategic immunization and screening protocols for selecting hybridomas.

The **Polyclonal Antibody Facility** team has extensive experience and expertise in antibody production and purification. Our technicians are dedicated to rabbit polyclonal antibody production – including antigen emulsion preparation, injections and blood centrifugation – using standard operating procedures.

From custom antibody production to one-step screening/cloning and high-throughput generation of hybridomas, the NRC-BRI Custom Antibodies Facility is founded on more than 20 years of experience.

Services We Offer

Monoclonal Antibody Facility:

- Custom rat and mouse monoclonal antibody production
- Conjugation to carrier proteins
- Development of hybridoma screening methods (E.L.I.S.A., Western blot, etc.)
- Immunoglobulin characterization: antibody sub-class determination, quantification, variable region cloning and sequencing
- Troubleshooting in all aspects of hybridoma establishment
- Assistance in antibody characterization
- Cryopreservation and cryostorage of hybridoma cell lines for our clients
- Adaptation of hybridoma to serum-free medium
- One-step screening/cloning and/or high secretors selection

- High-throughput hybridoma generation in collaboration with the NRC-BRI Microarray and High-Throughput Screening facilities

Polyclonal Antibody Facility

- Polyclonal antibody production in rabbits using standard immunization protocol
- Conjugation to carrier proteins
- Choice of adjuvant
- Antibody characterization such as Western Blot analysis, antibody quantification, and sera titer determination.
- Affinity purification
- Rabbit antibody labeling and fragment preparation
- Coordination with the NRC-BRI Custom Peptide Facility for design, synthesis and conjugation
- Consultation and support for our clients

Our Expertise

- Monoclonal antibody production in mice and rats
- Polyclonal antibody production in rabbits
- Flexibility in all aspects of antibody generation and screening to maximize its success
- Adaptation of immunization/screening protocols for difficult-to-generate antibodies

Equipment

- ClonepixFL mammalian cell clone picker which allows for screening and cloning hybridomas in a single step, or for high secretors selection
- Fully-equipped HEPA-filtered cell culture room
- E.L.I.S.A. and Western blot equipment, including a 96/384-well plate washer and liquid dispenser, fluorescence/absorbance microplate reader and Chemidoc imager

