

IMMUNOLOGY

Antibody Production and ELISA Development

Starting with immunogen or epitope sequence information, through purification and characterization of a therapeutic or diagnostic antibody, CBI can support drug and diagnostic development organizations from discovery to market. GLP and CLIA compliance with BSL-3 facilities.

Immunogen / Epitope Preparation and Characterization

- ◆ Epitope analysis and prediction of immunogenic peptide sequences
- ◆ MAPS (4 or 8 arm peptide sequences)
- ◆ Fully automated and manual preparation of immunogenic peptides
- ◆ Conjugation of immunogens to carrier proteins

Monoclonal Antibodies

- ◆ Hybridoma development
- ◆ Immunization and screening
- ◆ Fusion and screening of hybridomas
- ◆ Cloning and ascites productions
- ◆ *In Vivo* monoclonal production
- ◆ *In Vitro* monoclonal production
- ◆ Purification of IgGs, IgMs, IgYs

Polyclonal Antisera

- ◆ Immunization with supplied material or immunogens prepared by CBI
- ◆ Purification by large scale protein A or L, differential precipitation, DEAE chromatography or gel filtration chromatography

Monospecific Polyclonal Antisera

- ◆ Immobilization of antigen to column matrix or synthesized to antigen synthesized directly to column resin *de novo*
- ◆ Purification by peptide affinity ligand chromatography

Antibody Characterization

- ◆ Analysis with intact IgG and subsequent mass spectral analysis and amino acid analysis
- ◆ Chain separation by SDS-Page
- ◆ Direct N-terminal sequence analysis of separated heavy chain and light chain
- ◆ Peptide mapping of heavy and light chains by chromatographic or mass spectral analysis
- ◆ Primary sequence determination by digestion and mass spectroscopy
- ◆ Ligand binding studies by isothermal titration calorimetry (ITC)
- ◆ Thermal stability by differential scanning calorimetry (DSC)

Labeled Antibodies

- ◆ Custom labeling with biotin, HRP, AP, FITC, etc.
- ◆ ELISA determination of titers

ELISA Development

- ◆ Direct, indirect, and sandwich ELISA protocols
- ◆ Ligand supplied or developed at CBI
- ◆ Assay validation protocols

