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## MONOCLONAL ANTIBODY PRODUCTION SERVICES

Abbiotec offers custom monoclonal antibody production services to the scientific community to accelerate a project From Biology to Discovery™. Monoclonal antibodies are highly specific tools well suited for assay development and production. The experienced staff of Abbiotec processes a custom project with the same mindset that it develops antibody products for the Abbiotec catalog: we want an antibody that specifically detects the antigen in the chosen application.

### Monoclonal Antibody Production Options

Abbiotec offers different options to develop a monoclonal antibody with preset properties. Proteins, peptides, modified peptides, or cells can be used as antigens in mice and rats.

**Protein:** With 2 mg of protein as antigen, we generate a set of monoclonal antibodies against the target protein for assay development. We purify 10 mg of antibody within 5 months.

**Peptide:** We produce clones against a short region of the target protein. Abbiotec designs and synthesizes the best peptide candidate from the protein sequence. We purify 10 mg of antibody within 6 months.

**Modification-containing peptide:** For monitoring target activation by phosphorylation for instance, a phosphopeptide is used as antigen to generate phosphospecific monoclonal antibodies. We purify 2-10 mg of antibody within 6 months.

Abbiotec offers complimentary peptide design services to ensure the success of the project.

### Get a Quotation

Since prices vary upon project customization, we recommend submitting a quotation using the Quote Form available online for obtaining an accurate price. All requests are processed within 48 hrs.

### Guarantees

Abbiotec guarantees competitive pricing and delivery time for all routine options.

Every antibody project is supplied with a Peptide Design and Project reports, when applicable. Abbiotec guarantees that the antibody generated using an antigen synthesized by Abbiotec will recognize the antigen in ELISA.

Although most projects can be completed within 5-6 months, actual processing time is dependent on the peptide synthesis, animal immunization and hybridoma subcloning processes. Please contact the Technical Service Dept for updated timelines. Estimated delivery times are stated on all quotations.

**Browse the following pages to find a description of the services and technical protocols:**

- 1. Monoclonal Antibody Production Services**
- 2. Immunization Protocol**

## 1. Monoclonal Antibody Production Services

Protocol	Description	Time	Price
<b>Peptide Synthesis</b> Cat. No. 100220  Cat. No. 100310	Custom peptide synthesis up to 20 residue (20 mg) and HPLC purification (purity >90%)  Custom phosphopeptide synthesis up to 20 residue (20 mg) and HPLC purification (purity >90%)	2-3 weeks	\$500.00  \$800.00
<b>Peptide-Carrier Bioconjugation</b> Cat. No. 100110	Peptide conjugation to KLH and BSA carrier proteins for immunization and titration	1 week	\$200.00
<b>Immunization and Antisera Production</b> Cat. No. 102100	Five mice are immunized with antigen Pre-bleed and bleed titration before spleen collection 13-week immunization protocol	9-10 weeks	\$1,500.00
<b>Hybridoma Fusion &amp; Screening</b> Cat. No. 102200	Spleen cells are fused with myeloma cell, resulting hybridoma clones are screened against antigen, positive clones are subcloned, up to 10 selected clones are expanded and stored.	6-10 weeks	\$3,600.00
<b>Antibody Production &amp; Purification</b> Cat. No. 102300	Two clones are selected for large scale culture (up to 500 ml) Antibodies are purified from medium using Protein-A/G affinity chromatography with yield up to 15 mg	4-5 weeks	\$1,000.00
<b>Protein mAb Combo</b>  <b>Peptide mAb Combo</b>  <b>Modified Peptide mAb Combo</b>	Cat. No. 102100, 102200, 102300  Cat. No. 100220, 100110, 102100, 102200, 102300  Cat. No. 100310, 100220, 100110, 102100, 102200, 102300	<b>19-25 weeks</b>  <b>21-29 weeks</b>  <b>21-29 weeks</b>	<b>\$6,100.00</b>  <b>\$6,800.00</b>  <b>\$7,600.00</b>

## 2. Immunization Protocol

<b>Animal</b>	Balb/c mouse
<b>Adjuvant</b>	Complete Freund's Adjuvant (CFA) is used for the first injection followed by Incomplete Freund's Adjuvant (IFA) for subsequent injections.
<b>Immunogen</b>	Protein or conjugated peptide conjugated to KLH or protein (50-100 µg/injection)
<b>Injection Procedure</b>	Immunogen is diluted in 0.5 ml sterile saline solution and mixed with 0.5 ml appropriate adjuvant to form an emulsion that is injected subcutaneously in the shoulder region of the animal and intramuscularly in the large muscle of the rear leg. Half of the mix is saved for injection in the peritoneal cavity. Subsequent weekly injection is also made in the peritoneal cavity.
<b>Immunization</b>	<p>Week 1: Collect pre-bleed (20 µl)            Immunization No.1 with 100 µg immunogen in CFA</p> <p>Week 4: Immunization No.2 with 50 µg immunogen in IFA</p> <p>Week 5: Test bleed and ELISA</p> <p>Week 7: Immunization No.3 with 50 µg immunogen in IFA</p> <p>Week 9: Test bleed and ELISA</p> <p>The serum is titered by direct ELISA using the antigen immobilized to the wells. If the titer &gt; 1:50,000, the fusion is completed on Week 13, otherwise another immunization is performed and fusion is delayed for 2 weeks.</p> <p>Week 13: Immunization No.4 with 50 µg immunogen in IFA            Spleen cell collection and fusion</p>
<b>Hybridoma Fusion and Screening</b>	Spleen cell fusion with myeloma cells by using PEG protocol. Selection of positive clones by ELISA (up to 100). Screening of supernatants by customer is available for 2 weeks. Subcloning is then started, cells expanded and clones frozen for storage.