Sino Biological has over 10 years experience in antibody development and production. We provide one-stop service including antigen production, animal immunization, antibody development, ELISA kit development, hybridoma antibody gene sequencing and recombinant antibody production.

**Advantages**

### Various Antigens
- Recombinant Protein
- Natural Protein
- Peptide
- Cell
- DNA

### Advanced Technologies
- Optimized immunization
- High efficiency electrophusion
- Phage display library technology
- Solid / Liquid-phage screening
- Hybridoma serum-free cell culture
- Multiple purification methods

### Customized Service
- Optional validation: ELISA, WB, IHC, IF, FACS, ICC, HPLC, Octet, MS, etc.
- Multiple screening methods at key nodes
- Milestone payments
- Timely feedback and communication

## Service List

<table>
<thead>
<tr>
<th>Service</th>
<th>Deliverables</th>
<th>Timeline</th>
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| Mouse monoclonal antibody development             | 1) Positive clones  
                                              | 2) Purified antibodies        | 4~6 months                |
| Rabbit monoclonal antibody development            | 1) Antibody H and L chains sequences  
                                              | 2) Purified antibody         | 4~6 months                |
| Rabbit polyclonal antibody development            | 1) Purified antibody  
                                              | 2) ELISA detection result     | 11~14 weeks (from immunization to purification) |
| (Protein A/G purification or antigen affinity purification) |                                                                   |                           |
| EUSA kit development                              | ELISA kit                                                                 | 6~12 weeks (from purified antibody to EUSA kit) |
| Hybridoma cell culture and antibody production    | Purified antibody                                                           | 11~17 weeks                |
| Antibody gene sequencing from hybridoma cells     | 1) Antibody H and L chains gene sequences  
                                              | 2) Commercial vector cloned with antibody H and L chains gene        | 3~4 weeks                  |
| Recombinant antibody production                    | Purified antibody                                                           | 4~6 weeks                  |
Hybridoma Technology & Monoclonal Antibody Development

Detection and screening at multi-milestones

- **Milestone One:** Serum detection to determine the mouse for fusion
  - Immunization: 8–10 weeks

- **Milestone Two:** Supernatant detection to determine cells for subcloning
  - Fusion & Screening: 2–3 weeks
  - Subclone: 2–3 weeks

- **Milestone Three:** Supernatant detection to determine cells for proliferation
  - Production & Characterization: 1 week
  - Cell proliferation: 1 week

Phage Display Antibody Library & Monoclonal Antibody Development

**What is Phage Display Antibody Library**

Antibody phage display is based on genetic engineering of bacteriophages and repeated rounds of antigen-guided selection and phage propagation. This technique allows in vitro selection of mAbs of virtually any specificity, greatly facilitating recombinant production of reagents for use in research, clinical diagnostics and pharmaceuticals.

**Sino Biological Inc. offers mouse and rabbit Mab development services with phage display technique**

Advantages of rabbit monoclonal antibodies

- High affinity and specificity
- Perfect choice for testing mouse proteins and tissues
- Recognition of diverse and novel epitopes
- More choices for matched antibody pairs for ELISA
- Antibody gene sequences available for gene engineering

**Service Process**

- **Immunization:** 8–10 weeks
- **Antibody library construction:** 2–3 weeks
- **Screening:** 2–3 weeks
- **Vector construction:** 1 week
- **Production and characterization:** 3–4 weeks