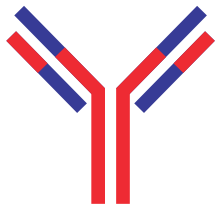


# Custom Antibody Service

Production of Monoclonal and Polyclonal Antibodies



RayBiotech offers a complete custom antibody service. Our capabilities include peptide antigen design (including phospho peptides), synthesis and carrier protein conjugation, immunization, titer analysis, serum collection or hybridoma fusion, and antibody purification. Many customization options are available, such as antibody conjugation, lyophilization, custom vialing & aliquotting, and antibody validation by Western blot, ELISA, or Immunoprecipitation. To obtain a quotation for a custom antibody project, please fill out the quote request form found on our service webpage: <https://www.raybiotech.com/custom-antibody-service>.

## ANTIBODY OPTIONS

### POLYCLONAL ANTIBODY

5-10 Weeks

#### Anti-pan peptide antibody

customer provides peptide: 1-2 mg

#### Anti-pan peptide antibody

RayBio generates peptide: 15-20-mer, 5-10 mg

#### Anti-phospho-peptide antibody

15-20-mer, 5-10 mg

#### Anti-protein antibody

customer provides purified protein: ~5 mg



#### Immunization of two rabbits

(Other animals available)



#### Perform test bleeds, ELISA titer tests



#### Purification of serum by protein A/G column (antigen affinity purification upon request)

Antibody conjugation with enzymes, fluorochromes, affinity ligands and solid surface conjugation is also available on request.

### MONOCLONAL ANTIBODY

4-5 Months

#### Anti-pan peptide antibody

customer provides peptide: ~4mg

#### Anti-pan peptide antibody

RayBio generates peptide: 15-20-mer, 5-10 mg

#### Anti-phospho-peptide antibody

11-15mer, 5 mg

#### Anti-protein antibody

customer provides purified protein: ~4mg



#### Immunization of two mice, fusion, screening, subcloning and initial characterization



#### Up to 3 monoclones selected and their supernatants tested by ELISA to confirm immunogen reactivity.

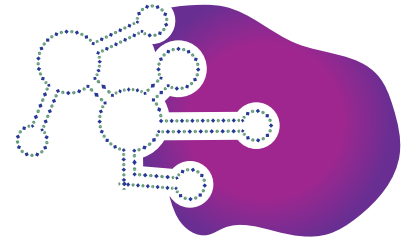


#### Antibody purification from 100 ml of hybridoma culture supernatant or 1 ml of ascites fluid OR by affinity column (1-5mg; upon request)

# Custom Aptamer Service

Production of single stranded DNA or RNA Aptamers

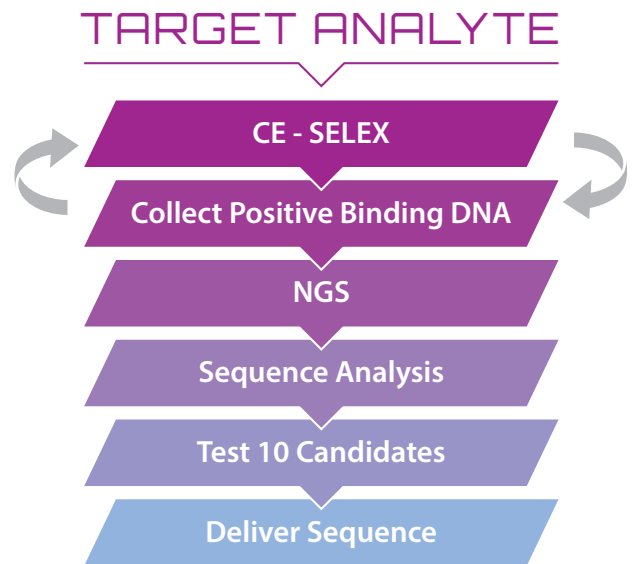
Often described as synthetic antibodies, aptamers are single stranded DNA molecules that fold into defined secondary structures and bind to targets with high affinity and specificity. Aptamers have been used in a variety of applications: protein-specific tissue staining, detection molecules in ELISA-like assays, targeted drug delivery, and even as an FDA-approved treatment for macular degeneration. Our custom aptamer service uses a process known as SELEX, Capillary Electrophoresis, and NextGen Sequencing to identify individual aptamers. Aptamers to a variety of targets can be developed, including proteins, peptides, and small molecules.



## THE APTAMER ADVANTAGE

- Increased thermal stability
- Retains activity after freeze-thaw cycles
- Increased enzyme resistance
- Conjugation with fluorescent dyes or biotin without post synthesis modification
- Easy conjugation to proteins, peptides, drugs, and other small molecules
- Significantly faster production than mAb
- Eliminates hybridoma storage and maintenance
- Easily scalable; no use of animals required
- Aptamer sequence delivered to customer for low-cost production

Service Phases	Time	Description
<b>Selection</b>	~4 weeks	DNA that binds to the target are partitioned from those that do not. Binding sequences are amplified via PCR and additional rounds of SELEX are performed
<b>Sequencing</b>	~4 weeks	NGS is used to analyze the entire aptamer pool and identify common aptamer sequences, motifs, and other patterns in the library to determine which to evaluate
<b>Candidate Aptamer Evaluation</b>	~4 weeks	10 aptamers are evaluated for binding and the best aptamer is supplied to the customer



Have an idea for a project? Our experienced technical specialists are available to discuss it with you. Contact us at [techsupport@raybiotech.com](mailto:techsupport@raybiotech.com).