

Antibody Biomarker Options

The following antibody options are available using Open Biosystems Biomarker Development Platform. All options include antigen design and presentation optimization with Antigen Profiler™ and Targeted Antigen Display™ where applicable. Resulting monoclonals and/or polyclonal antibodies can be further developed into matched pairs through screening to deliver validated capture and binding antibodies to customers ready to be formatted in the customer's assay.

Option 1: Peptide monoclonal

- 1) Antigen design and peptide synthesis to >90% purity
- 2) Peptide conjugation
- 3) Immunization into 10-mouse hybridoma program (5 Swiss Webster and 5 Balb/c)
- 4) Fusion of best 3 mice
- 5) Screening of fusions to select best capture and detection antibodies
- 6) Delivery of supernatants to client for evaluation

Time: 16-20 weeks

Option 2: Bacterial recombinant protein monoclonal

- 1) Take cDNA clone from Open Bio library (or synthesize gene) and subclone into pGEX or pET bacterial expression vector
- 2) Protein expression at 3mg scale
- 3) Immunization into 5-mouse hybridoma program
- 4) Fusion of best 2 mice
- 5) Screening of fusions to select best capture and detection antibodies
- 6) Delivery of supernatants to client for evaluation

Time: 16-22 weeks

Option 3: Mammalian recombinant protein monoclonal

- 1) Take cDNA clone from Open Bio library (or synthesize gene) and subclone into FreeStyle™ CHO mammalian expression vector
- 2) Protein expression at 3mg scale
- 3) Immunization into 5-mouse hybridoma program
- 4) Fusion of best 2 mice
- 5) Screening of fusions to select best capture and detection antibodies
- 6) Delivery of supernatants to client for evaluation

Time: 16-22 weeks

Option 4: Peptide rabbit polyclonal

- 1) Antigen design and peptide synthesis to >80% purity
- 2) Peptide conjugation
- 3) Immunization into 2-rabbit, 90-day protocol
- 4) Affinity purification of antibody

Time: 12-16 weeks

Option 5: Peptide goat polyclonal

- 1) Antigen design and peptide synthesis to >80% purity
- 2) Peptide conjugation
- 3) Immunization into 2-goat, 120-day protocol
- 4) Affinity purification of antibody

Time: 16-20 weeks

Option 6: Bacterial recombinant protein rabbit polyclonal

- 1) Take cDNA clone from Open Bio library (or synthesize gene) and subclone into pGEX or pET bacterial expression vector
- 2) Protein expression at 2mg scale
- 3) Immunization into 2-rabbit, 90-day protocol
- 4) Protein A/G purification of antibody

Time: 16-20 weeks

Option 7: Bacterial recombinant protein goat polyclonal

- 1) Take cDNA clone from Open Bio library (or synthesize gene) and subclone into pGEX or pET bacterial expression vector
- 2) Protein expression at 2mg scale
- 3) Immunization into our 2-goat, 120-day protocol
- 4) Protein A/G purification of antibody

Time: 16-20 weeks

There are two further possible options that include generating polyclonal antibodies in rabbits or goats using purified mammalian-generated protein, but these two options generally are not recommended due to the expense of the protein and the fact that a lot of antigen is required with the continued boosting needed to generate the equivalent amount of antibody to a monoclonal.

Antibody matched pair development

Antibodies suitable for capture and detection generated from above options can be developed for specific assay formats including traditional ELISA, MSD, and Luminex platforms.

- 1) Capture antibody optimization through IP screening
- 2) Capture antibody optimization through secondary capture immobilization
- 3) Antibody-bead bound screening
- 4) Distinct antibody site recognition through direct labeling and inhibition screening
- 5) Heterogeneous or homogenous species formats
- 6) Polyclonal-polyclonal, monoclonal-polyclonal, or monoclonal-monoclonal formats
- 7) Competitive ELISA format and standard creation

Cost: Quote

Time: Variable

All projects and options are done with milestone pricing to defer costs. As each milestone is pursued payment is due. For more details on specific milestones for options, please inquire directly with an Open Biosystems project manager.