
Monoclonal Antibody Sequencing

Poochon Proteomics Solutions offers a fast and professional cDNA based de novo sequencing service for your valuable monoclonal antibodies. We can sequence from any antibody producing cell line with a service that can be tailored to your requirements for quality control, patent applications, antibody engineering and drug development. Plus, we offer a service of protein amino acid sequence confirmation by LC/MS/MS.

Antibody Sequencing from Variable Domains or Full Length

Service description: Service packages can be chosen from cloning and sequencing variable regions plus leader sequences (**VD-101**) or full length plus leader sequences (**VD-102**) of both heavy chain and light chain from mAb producing cell lines.

You send:

A pellet of snap frozen cells (1×10^7 cells) expressing your antibody

- EBV transformed B-cell line
- IgG expressing CHO or HEK 293 cell line
- Selected mAb producing hybridoma cell line

We deliver:

- ✓ A detailed project report with heavy chain and light chain DNA sequences and alignments

Workflow:

Our strategy is based on the technique of RACE (rapid amplification of cDNA ends) and our expertise ensures the full sequence is accurate.

- **Stage 1: Total RNA extraction from the cell pellet.**
- **Stage 2: Reverse transcription and PCR amplification of heavy and light chains.** We perform both 5'- and 3'- RACE to obtain amplified products of full length and 5'- RACE of variable region. In brief, total RNA will be transcribed into cDNA using either an Oligo(dT) or a gene-specific anti-sense primer. Specific murine and human constant domain primers are used to determine the isotype of the antibody. Proprietary enzyme technology ensures a high success rate to obtain accurate amplified products.
- **Stage 3: Cloning into a standard sequencing vector.** The amplified products are purified and inserted into a sequencing vector.
- **Stage 4: Sequencing analysis.** Multiple independent colonies are sequenced for each chain to ensure accuracy (typically 12 colonies per chain).
- **Stage 5: Final Report.**

Price: Starting from \$980/sample (discount for batch order), request a quote

Turnaround time: 7-12 business days

VD-103: Mass Spectrometry mAb Protein Sequencing

Service description: This service package is for analyzing the amino acid sequences of mAb using mass spectrometry analysis to confirm the sequences determined in VD-101 or VD-102.

You send:

- Purified antibody (> 20 µg/sample, purity >90%)

We deliver:

- ✓ A detailed project report with amino acid sequence confirmation
- ✓ A list of peptides identified for target protein and peptide mapping
- ✓ A list of identified host proteins if any
- ✓ A list of identified host proteins with matched peptides sequences
- ✓ Purity
- ✓ Method description
- ✓ The raw data file sent via pCloud upon request

Workflow: sample preparation, trypsin digestion and chymotrypsin digestion, LC-MS/MS analysis, data analysis and results report

Price: \$1,000/sample

Turnaround time: 10 business days

VD-104: Validated Full Length Antibody Sequencing

Service description: This service package is a combination of VD-102 and VD-103.

Price: \$2,480/sample

Turnaround time: 20 business days

AC-105: Antibody Sequence Cloning

Service description: This service package is for the cloning of antibody expression construct (standard pUC-CMV based vectors) upon ordering any of the sequencing services.

Price: \$480/sample

Turnaround time: 7 business days (standard pUC-CMV based vectors, time for customer designated vector cloning varies)

Hybridoma Monoclonal Antibody Sequencing Services

Name	Cat#	Description	Price
Variable Domains Sequencing	VD-101	Clones and sequences both heavy chain variable region (VH) and light chain variable region (VL) plus leader sequences, 10 business days	\$980.00
Full Length Antibody Sequencing	VD-102	Clones and sequences variable regions, constant domains and leader sequences for both heavy chain and light chain from hybridoma, 12 business days	\$1650.00
Mass Spectrometry Protein Sequencing	VD-103	Mass spectrometry analysis of monoclonal antibody purified from hybridoma to confirm both HC and LC amino acid sequences determined in VD-101 or VD-102, 10 business days	\$1000.00
Validated Full Length Antibody Sequencing	VD-104	Clones and sequences variable regions, constant domains and leader sequences for both heavy chain and light chain from hybridoma; Mass spectrometry analysis of monoclonal antibody purified from hybridoma to confirm both HC and LC amino acid sequences, 20 business days	\$2480.00
Antibody Sequence Cloning	AC-105	Order any of the sequencing services and cloning of mAb antibody cDNA into designated expression vector, 7 business days (standard <i>pUC-CMV</i> based vectors, time for customer designated vector cloning varies)	\$480.00

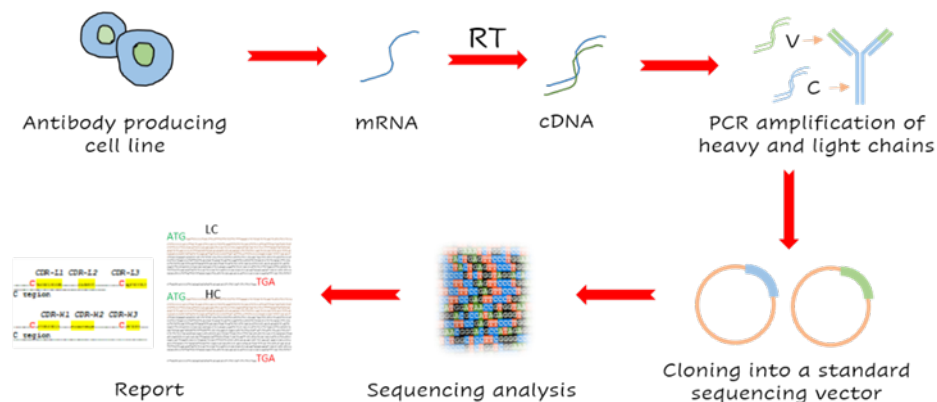


Figure 1: Work-flow of Poochon's monoclonal antibody sequencing.