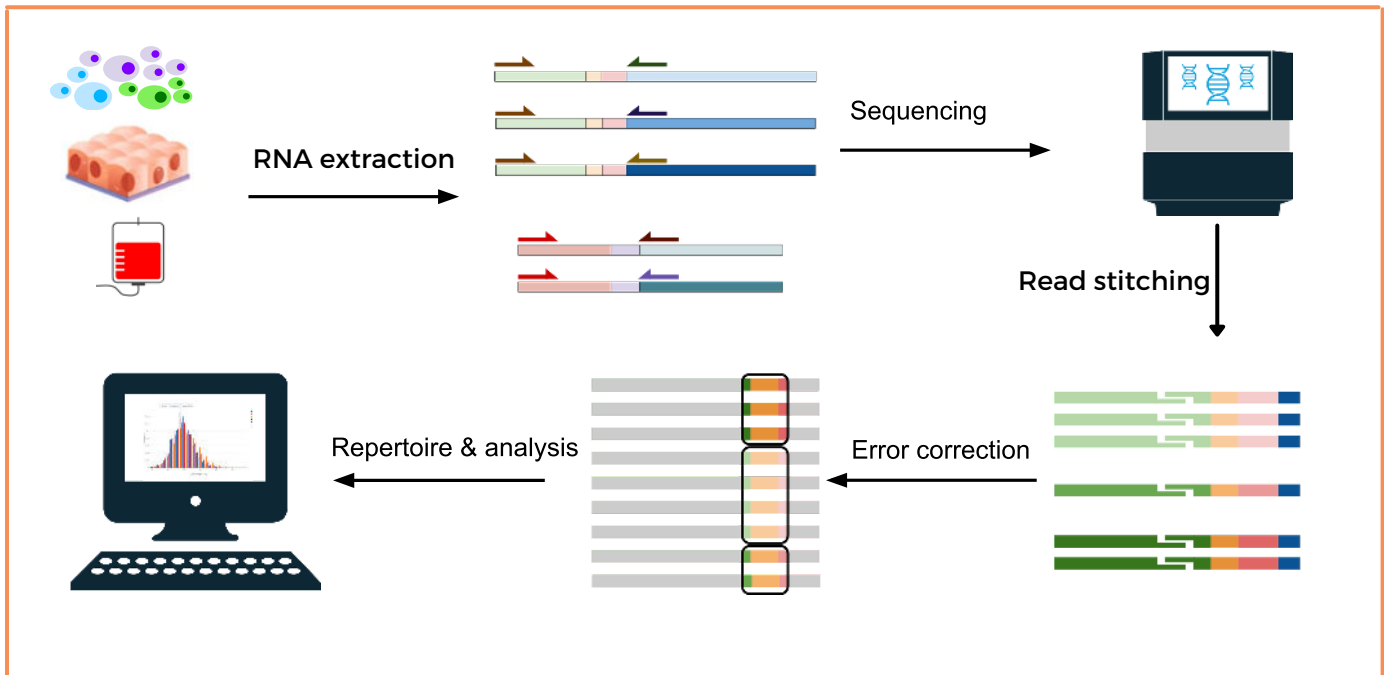# Bulk B Cell Receptor Sequencing via NGS

A flexible antibody repertoire sequencing and analysis service

Key Benefits:

- ✓ Enabling antibody sequencing beyond mouse and human
- ✓ Deep sequence polyclonal antibody samples
- ✓ Discover novel variants of antibody leads
- ✓ Complete antibody repertoire with germline gene and CDR annotations

The Reptor™ Workflow

| Extensible to any species, including transgenics | Turnaround time 3 weeks |

Check out our latest blog post on immune repertoire sequencing in human!

Deliverables

- AIRR-seq (tsv) files of every sequence recovered
- Interactive HTML report with repertoire summary statistics including germline gene usage, CDR3 lengths, mutation counts and clone sharing
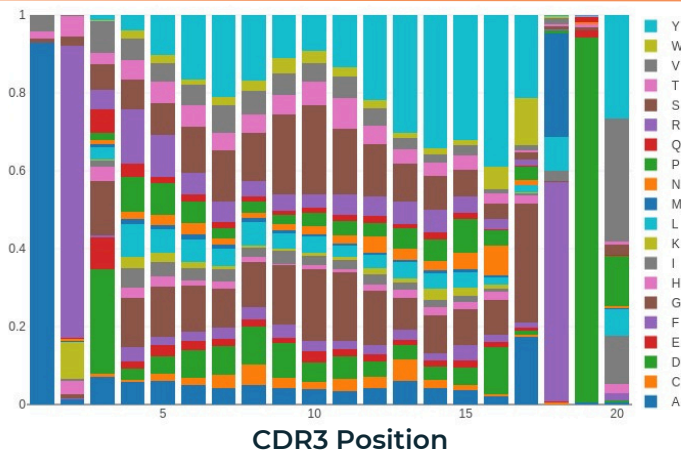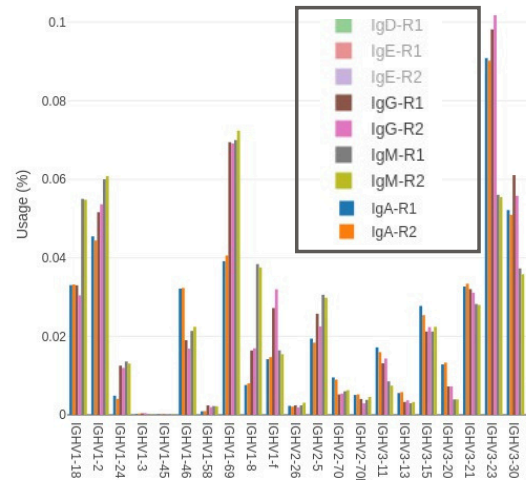
Automated Diversity Analysis

Germline V-gene usage
Antibody sequences are automatically annotated with germline V, D, and J genes. Germline V-gene usage can be telling of antibody diversity.

Mutation analysis
Somatic hypermutation sites are detected on each antibody. The distribution of mutations per antibody is useful to analyze affinity maturation.

CDR sequence motifs
The CDR regions for each antibody are automatically identified. Sequence motifs for each CDR and the CDR3 length distribution are plotted.

Clonal lineage clustering
Antibodies that originated from the same germline rearrangement may share specificity. Antibodies from the same lineage are automatically clustered.

CDR3 Position

Example Visualizations from Report

Other Sequencing Services

1. **Hybridoma Sequencing** - Determine dominant and minor sequences for each hybridoma
2. **Display Library Sequencing** - Assess germline gene representation and CDR3 diversity
3. **Antibody Protein Sequencing** - Recover full-length antibody sequence starting from protein.