

Sequence Alignment and Positional Analytics

Multi-Scheme Numbering and CDR Regions, Dynamic Sequence Logos, and Integrated Liability Tracking

Inspect and compare antibody sequences with structural precision using industry-standard numbering schemes across variable, constant, and leader domains. AbLead pairs interactive multi-chain alignments with stacked amino acid Sequence Logos, consensus baselines, and aligned germline reference tracks with live liability overlays.

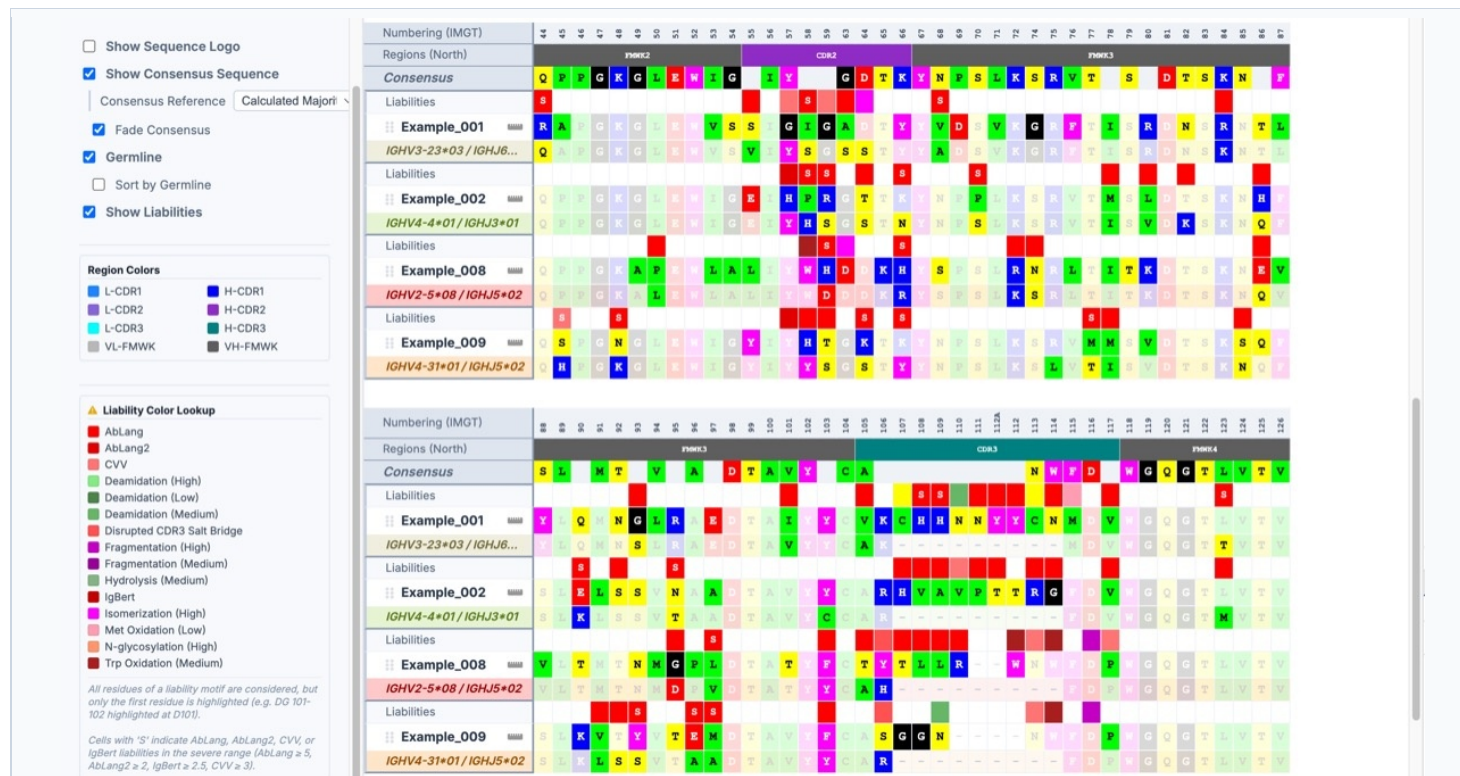


Figure: Interactive multi-chain alignment displaying closest germline deviations, dynamic sequence logos, and flagged developability liabilities.

CORE CAPABILITIES

- **Multi-Scheme Numbering and CDR Region Support:** Dynamically switch or multi-display between numbering and CDR schemes.
- **Dynamic Stacked Sequence Logos:** High-resolution letter stacks proportional to positional frequency, colored by ABHAND physicochemical properties.
- **Consensus Baseline Tracking:** Flexible majority-rule or reference-clone consensus with match fading to instantly spotlight somatic mutations.
- **Integrated Germline and Liability Rows:** Aligns closest V/J germlines beneath queries and overlays sequence liability motifs with severe (S) flags.

DEVELOPABILITY ADVANTAGE and IMPACT

- **Paratope and CDR Conservation:** Pinpoints conserved binding residues versus permissive positions across clonal families to guide engineering.
- **IP Claim Generation:** Facilitates sequence range definitions and consensus drafting for patent applications and freedom-to-operate filings.
- **Direct Design and Observation Pinning:** Click any residue position to record institutional lab observations or queue mutations for variant generation.
- **Publication-Ready Exports:** Generates high-resolution SVG and PNG sequence logo figures and formatted Excel sheets preserving all region annotations.

The AbLead Advantage: By integrating standard numbering schemes, dynamic sequence logos, and aligned germline liabilities into one view, AbLead turns sequence alignment into a diagnostic and engineering command center.

Accelerate Your Antibody Lead Optimization and De-Risk Development

Request a Live Demo: ablead@ketchemconsulting.com | Explore Platform: ablead.ketchemconsulting.com

Ketchem Biotherapeutics Consulting LLC • Developability by Design