Powering Antibody Discovery

Accelerate your pipeline with our trusted early-stage research solutions

High-quality tools for screening

High-quality products to support your research

Tailored solutions to fit your discovery workflow

Comprehensive solutions for every stage of antibody discovery

Accelerate your antibody discovery pipeline with reliable tools that support your early-stage research. With solutions from Integrated DNA Technologies (IDT), you can assess targets, screen interactions, and move faster—with confidence.

Target assessment

Involves target identification and target validation by identifying and characterizing a potential target solution for a therapeutic antibody.

Products

- **Alt-R™ Custom CRISPR gRNA Libraries**
- **rhAmpSeq™ CRISPR Analysis System**
- **xGen™ NGS products**
- **oPools™ Oligo Pools**

Hit generation

Confirms interaction between an antibody and the target (i.e., antibody-antigen interactions).

100s of hits generated and profiled by relying on high-throughput screening approaches.

Products

- **eBlocks™ Gene Fragments**
- **gBlocks™ Gene Fragments**
- **Genes**

Lead identification & optimization

Lead antibody molecules are selected and further optimized. Results in a therapeutic antibody candidate selected to move along the drug development process.

Products

- **eBlocks Gene Fragments**
- **oPools Oligo Pools**
- **gBlocks Gene Fragment Libraries**
- **xGen NGS products**

Optimized tools for antibody innovation

Accelerate your timelines with ready-to-use tools designed to keep your research moving forward. Our integrated solutions streamline complex workflows, allowing for greater efficiency and consistency. Empower your antibody engineering efforts with artificial intelligence (AI)-guided design to enable smarter data-driven decisions. Support rapid iteration with tools built for combinatorial testing, targeted variant control, and continuous optimization. And with customizable components tailored to diverse research needs, you gain the flexibility to adapt and innovate at every stage of discovery.

Artificial intelligence guided design

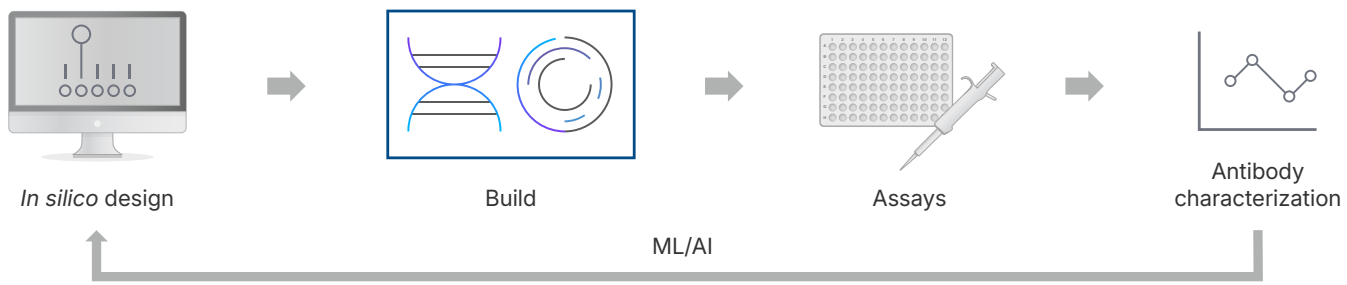
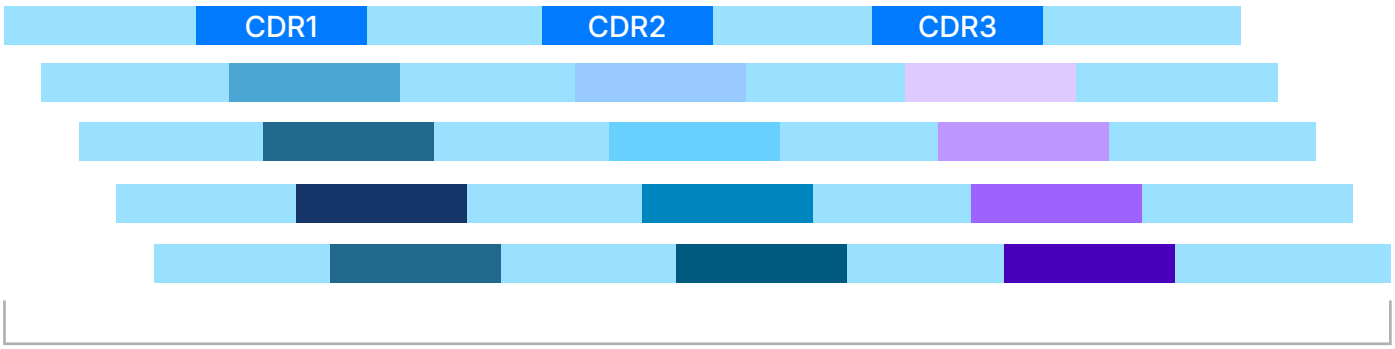


Figure 1. AI-guided antibody design workflow. Artificial intelligence accelerates antibody design by streamlining candidate identification, optimization, and engineering.



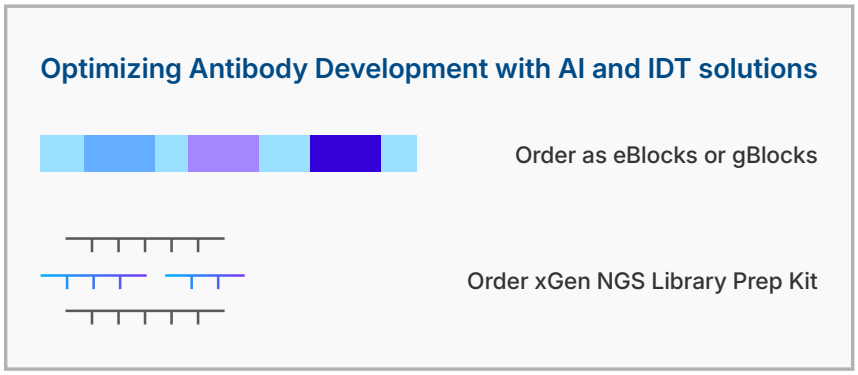


Figure 2. AI-Driven Antibody Design and Streamlined Production with IDT Solutions. Artificial intelligence accelerates antibody discovery by guiding the design of complementarity-determining regions (CDRs). During the design phase, researchers can specify targeted mutations or test novel CDR combinations as illustrated here. Each bar represents a unique antibody variant composed of CDR1, CDR2, and CDR3 segments. Color differences indicate specific mutations or combinations selected for testing. These custom sequences can be synthesized using IDT's eBlock™ or gBlock™ Gene Fragments, enabling rapid prototyping. For downstream analysis, the xGen™ NGS Library Prep Kit supports high-throughput sequencing of antibody variants. This integrated workflow enhances accuracy, reduces development time, and empowers researchers to efficiently explore antibody diversity.

Power your pipeline with synthetic gene fragments: From fragments to function

IDT's synthetic double-stranded DNA fragments—gBlocks, HiFi gBlocks, and eBlocks—enable efficient hit generation, high-throughput screening and lead optimization. These scalable tools support the creation of nanobodies, facilitate display-based selection methods, and streamline sequence refinement for improved efficacy and safety.

Ready to accelerate your antibody discovery? Explore our **portfolio** or speak with a **specialist today**!

For more information, visit **idtdna.com/AntibodyDiscovery**

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