

HiTMab - Monoclonal antibody discovery solutions

Monoclonal antibodies in 3-6 months | Screen 1000s of candidates

Target multiple epitopes | Simple to complex targets

Single cell B cell receptor sequencing is used to identify paired heavy and light chain combination for antibodies against targets of interest, thus generating a large repertoire of monoclonal antibodies more efficiently than the hybridoma technology. Signiosbio's HiTMab (High-throughput monoclonal antibody discovery) platform based on its proprietary single cell genomics technology enables identification of multiple antigen specific B cells against a target. B cell clones with best affinity to the antigen are then selected based on a proprietary workflow followed by antibody expression and purification.

Features of HitMab

- Advanced single-cell genomics based antibody discovery platform
- · Generate antibodies for low or poorly immunogenic proteins
- Provides a large repertoire of antibodies to choose, offering maximal antibody diversity compared to hybridoma-derived antibodies
- · Saves time by high-throughput rapid discovery of thousands of antibodies using single-cell BCR sequencing
- Completed in ~16 weeks compared to >30-42 weeks for hybridoma-based antibody discovery (Figure 1A)
- Convenient to reformat the antibodies
- Customized functional assays for optional antibody characterization, tailored to meet the specific requirements of each customer

Workflow

The antigen of interest is used in a proprietary immunization plan to obtain a robust immune response. Next, antigen-specific B cells are enriched and captured to perform single-cell B cell receptor sequencing (Figure 1B). Using our proprietary bioinformatics pipeline, paired antibody sequences are identified and prioritized (Figure 2). They are recombinantly expressed and tested. Characterization of antibody affinity, binding by ELISA, BLI, FACS, and functional assays are performed to further identify clones with the desired properties. Finally, selected antibodies are expressed, purified, and delivered in a desired format for direct use in further *in vitro* or *in vivo* applications.





Figure 1. (A) Timeline and (B) Schematic of HiTMab workflow.



Figure 2. Schematics of the bioinformatics analysis. Signios Bio's proprietary platform analyzes and selects antibody sequences, which are subsequently expressed through recombinant techniques.



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