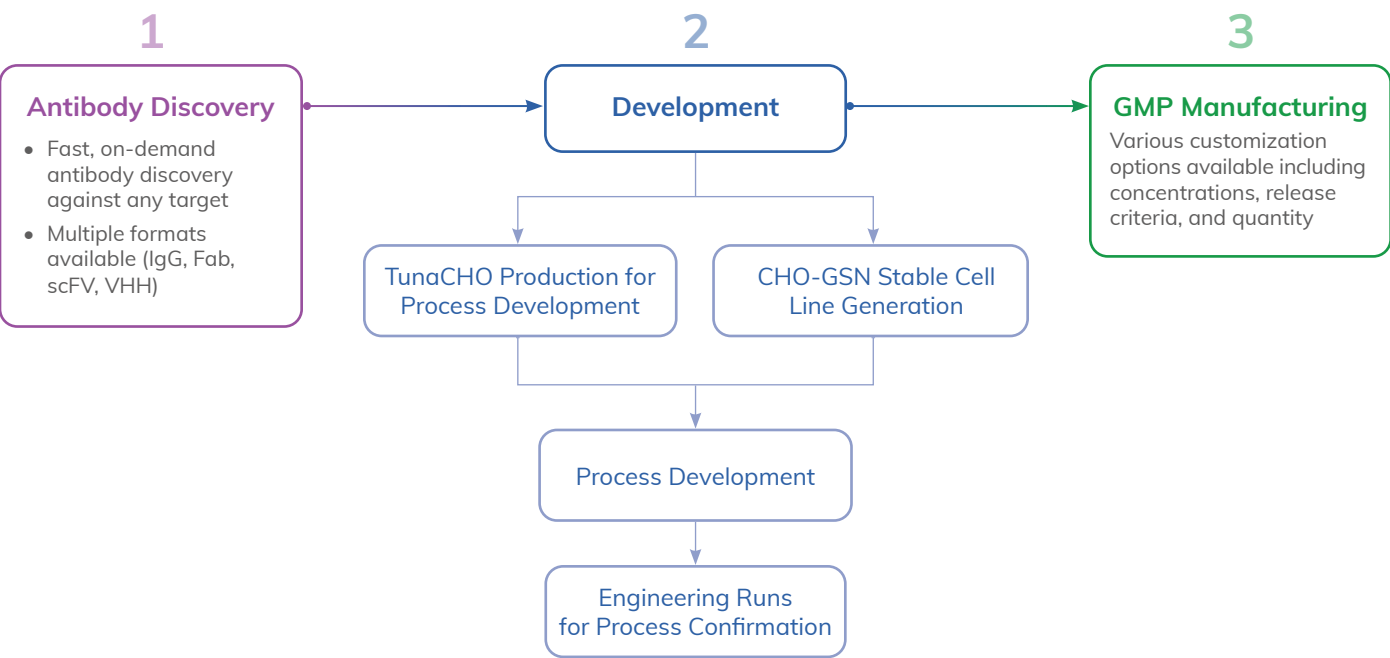




# Discovering Diagnostics with LakePharma ASR Solutions

Analyte-specific reagents (ASRs) such as monoclonal antibodies against idiotypes, proteins, or haptens are used for identification and quantification of substances in biological specimens. LakePharma offers integrated solutions for ASR discovery, development, and GMP manufacturing, with all services performed in the Bay Area.

## Integrated Solutions for ASR Manufacturing



Learn more at [lakepharma.com](https://lakepharma.com)

To learn more about LakePharma reagents to support serological tests for SARS-CoV2, visit <https://lakepharma.com/integrated-solutions/covid-19-activities/covid-19-key-reagents>

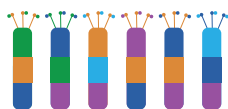
## ASR Antibody Discovery

- Fast on-demand antibody discovery against any target
- Multiple formats available (IgG, Fab, scFv, VHH)

### Multiple approaches available

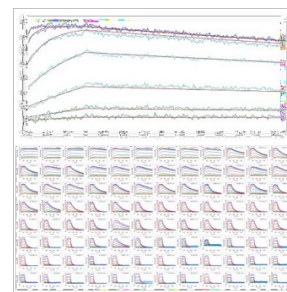
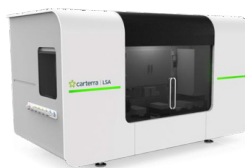


Immunization-based hybridoma and/or immune phage/yeast display



Naïve/synthetic phage display libraries

### Powerful kinetic-based screening with Carterra™ LSA high-throughput SPR

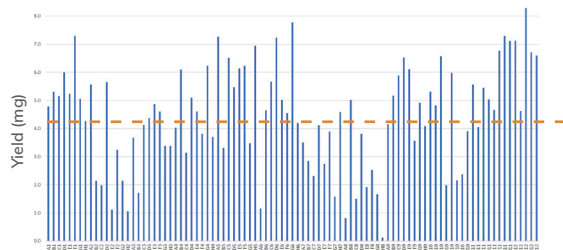


## ASR Development

### Transient Protein Production with TunaCHO™

- Productivity can reach 2 g/L
- Consistent titer from 10 mL shake tubes to 10 L in WAVES
- Flexible scale and faster timeline

#### TunaCHO™ High Throughput Production

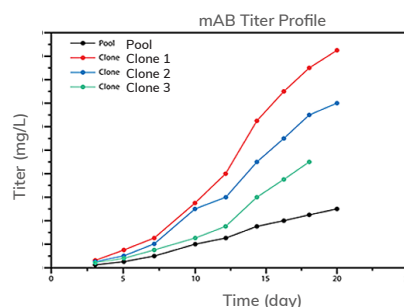


Average yield: 450 mg/L

### CHO-GSN™ Technology to Make Cell Lines for Manufacturing

- GS selection in CHO-K1 with GS knockout
- Royalty-free commercial license

#### CHO-GSN™ Stable Platform



CHO-GSN™ exhibits high productivity after pool enrichment.

Process development for downstream and analytical assays to establish parameters for engineering & GMP runs.

## GMP Manufacturing for ASR Support

LakePharma can manufacture components of *in vitro* diagnostic kits for ASR or companion diagnostic applications under GMP conditions.

### Key Highlights



ISO 9001:2015 certified



Various customization options available:

- Concentrations
- Release criteria
- Quantity



Two royalty-free CHO platforms are available to accommodate different timelines and needs:

#### TunaCHO™ Transient Platform

- Quick turnaround since RCB step is not needed
- Flask and WAVE production tailored to specific needs

#### CHO-GSN™ Stable Platform

- Robust, high performance
- Flexible production scale from small to large quantities



**LakePharma**  
The Biologics Company

Learn more at [lakepharma.com](https://lakepharma.com)

To learn more about LakePharma reagents to support serological tests for SARS-CoV2, visit <https://lakepharma.com/integrated-solutions/covid-19-activities/covid-19-key-reagents>