



Filamentous phage M13 is the mostly commonly used for antibody display.

M13 coat protein 3 (g3p), present on average in 5 copies at the tip of the M13 phage particle, is often the first choice for phage display fusions because of its tolerance for large insertions.

Directly insertion makes the phage plasmid too large to transfection and amplification.

A phagemid and helper phage system is commonly used for antibody display.

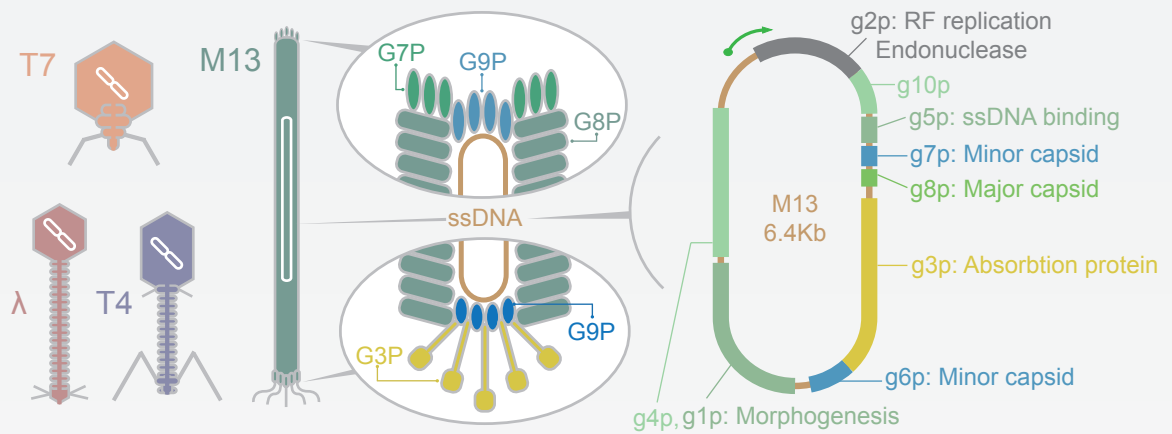
Monovalent display is preferred due to the demanding of high affinity monoclonal Abs.

Solid surface immobilized with antigen is used for antibody phage screening.

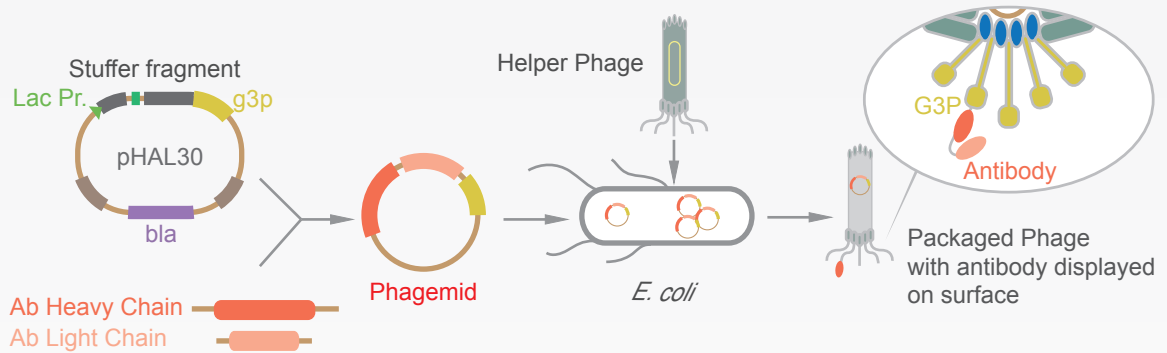
Antibody phage particles that bind weakly to the antigen and the vast excess of non-binding antibody phages are removed by stringent washing. Specifically binding antibody phage are eluted and used for infection of *E. coli* for the next round screening.

2-3 round of screening are necessary for monoclonal antibody with high enough affinity.

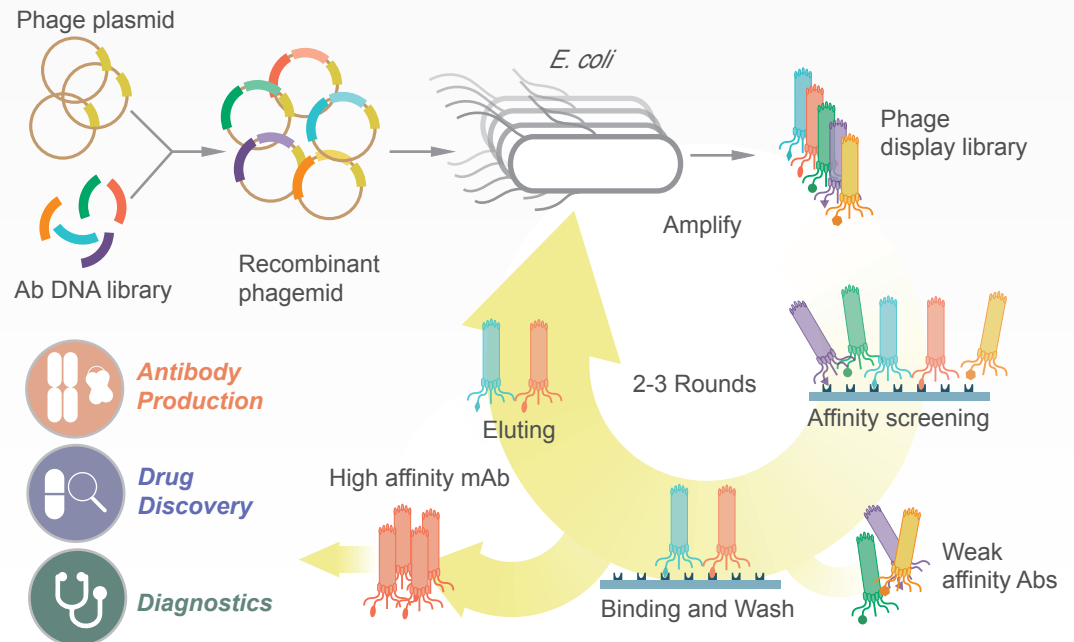
## 1 Phage: structure and genome



## 2 Phagemid system for antibody display



## 3 Phage display library and screening



## WHAT WE DO:

- ✓ Phage display library construction
- ✓ Phage display library screening
- ✓ Specific antibody discovery
- ✓ Peptidomic discovery

## FEATURES:

- ✓ Immune, naïve or synthetic library construction
- ✓ Pre-made library screening
- ✓ Large library capacity
- ✓ High affinity from  $10^{-7}$  to  $10^{-9}$
- ✓ Various phage display systems (M13, T4, T7)
- ✓ Tailored biopanning strategies

**Creative Biolabs**  
**Phage Display &**  
**Antibody Library**  
**Services**