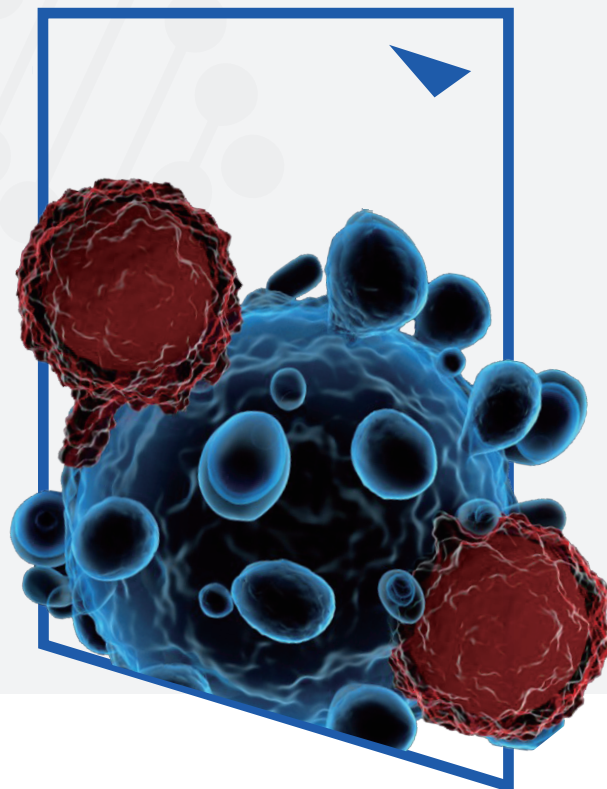


YEAST DISPLAY SERVICE

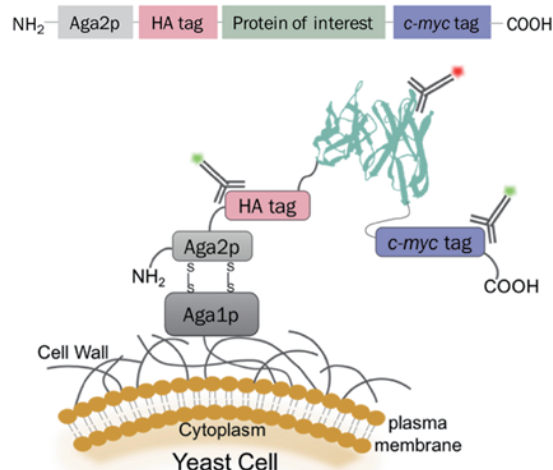
CREATIVE BIOLABS

Creative Biolabs has developed and commercialized a proprietary yeast display platform based on our unique **Ultraff™** yeast display technology, which permits a wide range of innovative yeast display services, including library construction and screening, antibody affinity maturation, production of specific monoclonal antibodies etc. **Ultraff™** yeast display technology enables the production of highly efficient libraries of high diversity and is now very efficient for high affinity antibody discovery and antibody affinity maturation.



Yeast Display Technology

Yeast display (or yeast surface display) is a particularly powerful protein engineering technique that uses the expression of recombinant proteins incorporated into the cell wall of yeast for isolating and engineering antibodies and has been applied to isolating recombinant antibodies with binding specificity to a variety of proteins, peptides, small molecules and T cell receptors. Yeast is superior to phage for human antibody display in which the eukaryotic expression environment of yeast cells is more suitable for human protein folding, modification and translocation for display. Therefore, the yeast displayed antibodies are conformationally and functionally closer to human native counterparts.



Features



Similar to phage display, yeast display provides a direct connection between genotype and phenotype. A plasmid containing the gene of interest is contained within yeast cells and the encoded antibody is expressed on the cell surface;



The display level of each yeast cell is variable with each cell displaying 10^4 to 10^5 copies of the scFv;

- Screening of antibody variation of surface expression and avidity can be quantified using fluorescence-activated cell sorting (FACS), which measures both the strength of antigen binding and amount of antibody expression on the yeast cell surface using separate tags on the antibody and antigen;
- FACS binding assays provide a much more quantitative way of assessing high binding affinity and selectivity for the antigens and offer the ability to accurately control selection parameters (binding population percentage, signal normalization, and desired binding affinities) by flow cytometry;
- There are usually 3-5 rounds of enrichment of target antigen-binding clones;
- The antibody displayed by a single yeast colony is evaluated for specificity and reproducibility. If the antibody has the required functionality, the antibody gene is sequenced as part of antibody validation.

Applications of Ultraff™ Yeast Display Technology

Our unique Ultraff™ yeast display technology is a highly robust display system for the discovery and optimization of monoclonal antibodies with pM affinity – the highest antibody affinity ever enabled by an in vitro recombinant antibody production technology, which can be adapted for a wide variety of research purposes including:

- ⬡ Therapeutic antibody discovery
- ⬡ Monoclonal antibody discovery from a variety of species includes:
Human, mouse, rat, rabbit, llama, chicken, monkey, dog, cat, camel
- ⬡ Antibody humanization
- ⬡ Antibody affinity maturation
- ⬡ Protein interaction study

With extensive experience accumulated over decades, scientists in Creative Biolabs could provide our worldwide clients with the most comprehensive yeast display services and products, including:

Yeast Display Service

- Yeast Display Library Construction Service
- Yeast Display Library Screening Service
- Yeast Display-Based Antibody Affinity Maturation
- Yeast Display-Based T Cell Receptor Engineering
- Combination of Phage and Yeast Display to Identify Human Monoclonal Antibodies

Contact Us

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