

With their vital physiological functions, membrane proteins are popular drug targets for therapeutic and diagnostic applications. But their intricate structures and low natural abundance make most membrane proteins very difficult to express and isolate. Through cell-based protein expression systems and cell-free protein synthesis systems, as well as the help of detergent and lipid, highly purified membrane proteins can be reconstituted into multiple formats, such as detergent micelles, liposomes, nanodiscs and polymers. Besides, virus-like particles (VLPs), designed peptides, and whole cell antigens can all present integral membrane protein as immunogens.

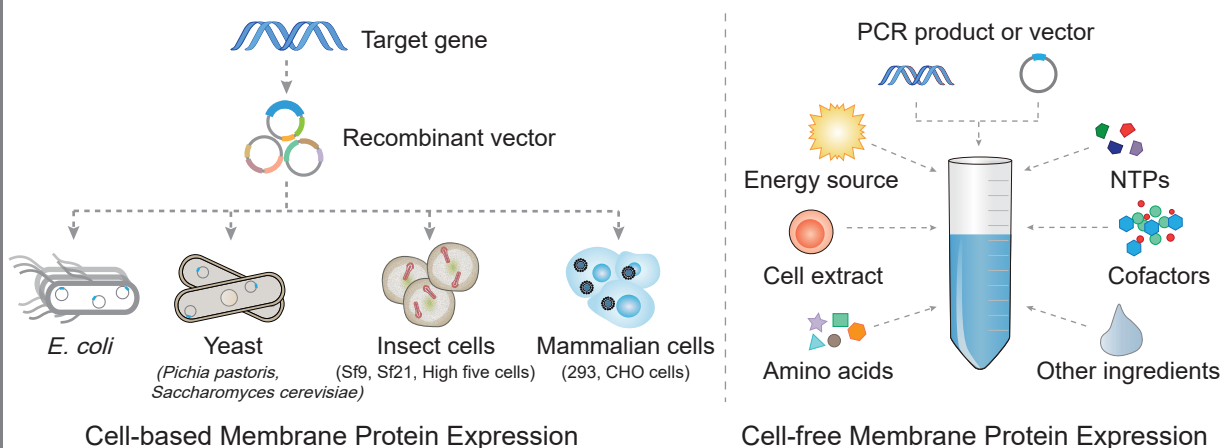
Using hybridoma, phage display, and B cell sorting, the above mentioned substances can serve as excellent antigens for raising highly specific and high affinity antibodies.

**Hybridoma Technology:** as a well-established methodology, it is widely used to produce antibodies for a variety of applications. Using multiple formats of membrane proteins as antigen for antibody discovery, hybridoma technology can be utilized for immunization and antibody selection.

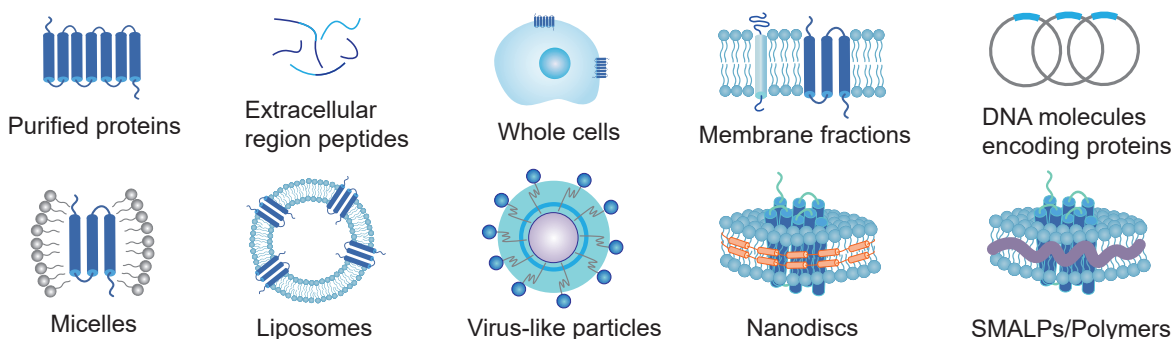
**Phage Display Technology:** this technique is based on the concept of linking genotype with phenotype, creating a large pool of antibody candidates that can represent the entire immune repertoire.

**B Cell Sorting:** it not only can screen a large number of B-cells from humans or immunized animals but can also identify rare antibodies with the biological activity of interest and favorable manufacturing properties. It includes single B cell screening, cloning, and *in vitro* expression.

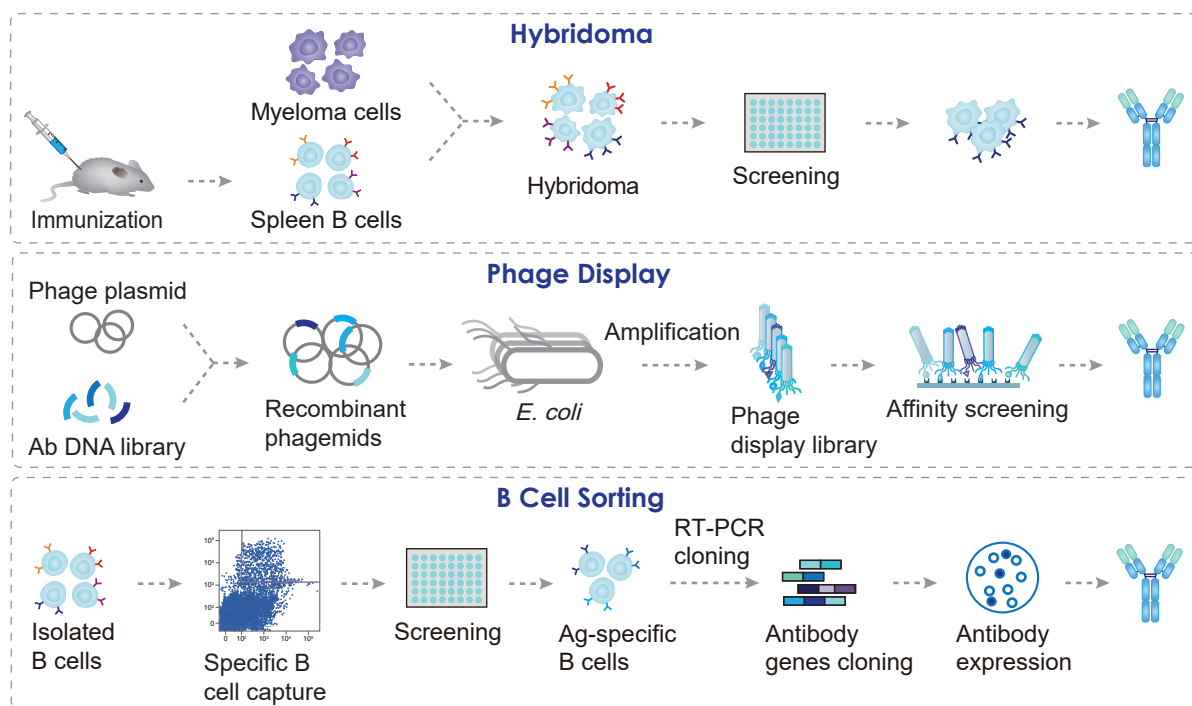
## 1 Expression of Membrane Protein Antigen



## 2 Different Formats of Membrane Protein Antigen



## 3 Approaches to Discovering Membrane Protein Antibodies



### WHAT WE DO:

- ✓ **Magic™ Membrane Protein Antigen Preparation Services**
- ✓ **Magic™ Membrane Protein Characterization Services**
- ✓ **Magic™ Anti-Membrane Protein Antibody Discovery Services**
- ✓ **Mouse Immunization & Hybridoma Services**
- ✓ **Phage Display & Antibody Library Screening Services**

### FEATURES:

- ✓ **Expertise in Membrane Protein Antigen Preparation**
- ✓ **One-stop Solution**
- ✓ **Different Antibody Discovery Strategies**
- ✓ **Customized Solutions**
- ✓ **100+ Cited Publications and Patents**