Yeast EBY100 strain

Summary

Solvent	25% glycerol
Volume	1mL
Genotype	MATa ura 3-52 trp 1 leu2 Δ 1 his3 Δ 200 pep4: HIS3 prb1 Δ 1.6R can1 GAL
Storage	-80 ˚C freezer storage

Description

EBY100 brewing yeast is a commonly used carrier for surface display, and its growth characteristics are different from those of wild yeast. Therefore, it is suitable for cultivation. There are high requirements for the temperature and speed of cultivation. It is usually placed in a constant temperature horizontal shaking incubator at 150rpm and incubated at 30 ˚C for 48 hours. EBY100 strain mainly used for yeast surface display, paired with pYD1 plasmid. The pYD1 plasmid is targeted towards EBY100 yeast surface display technology.

Yeast surface display technology is a eukaryotic protein expression system, whose basic principle is to combine exogenous target protein genes with fusing the designated vector gene sequence and introducing it into yeast cells. After inducing expression of the fusion protein, the signal peptide guides the fusion protein towards the cells exocrine. Due to the structure of the fusion protein anchoring to the yeast cell wall, the fusion protein can be anchored to the yeast cell wall, and immobilize and express exogenous protein molecules on the surface of yeast cells.

To transform EBY100 you will need the following reagents

- Minimal dextrose plates containing leucine and tryptophan
- YPD medium
- Minimal dextrose plates containing leucine
- 20% Glucose
- 0.5-5 µg plasmid DNA (DNA may be isolated from E. coli using your method ofchoice)

Transformation of EBY100

Follow the general steps below to transform EBY100.

1. Take the glycerol stock of EBY100 and streak out on a minimal dextrose plate containing leucine and tryptophan.Incubate at 30°C until colonies appear (1-2 days).
2. Use your method of choice to prepare competent cells and transform with pYD1 or pYD1 containing your gene of interest.
3. Plate the transformation reaction (50-150 µl) on minimal dextrose plates containing leucine. Incubate the plates at 30°C for 2 to 4 days until single colonies appear. Once you have transformants, you are ready to test for display of your fusion protein.