Modified Strains PJ69-7A and PJ69-7B for the Yeast Two-Hybrid System

WARF: P00227US

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing two new strains for the yeast two-hybrid system.

Overview

The yeast two-hybrid system is a powerful technique used to detect protein-protein interactions. The technique has been used to establish physical interactions between genetically identified proteins, to identify the components of multiprotein complexes, and to map specific domains within proteins responsible for an interaction. However, there are several limitations to the two-hybrid system, including host strains that result in a large number of false positives.

The Invention

A UW-Madison researcher has developed two strains, known as PJ69-7A and PJ69-7B, that eliminate many of the problems associated with false positives. In addition, the strains include both mating types, allowing high throughput screening.

Applications

- Yeast two-hybrid system for identifying interactions between proteins

Key Benefits

- The strains incorporate three different markers all with different promoters.
- The strains contain a non-leaky HIS3 marker that eliminates the use of high concentrations of the drug 3-aminotriazole (3-aminotriazole inhibits desired positive clones), improving sensitivity.
- The strains improve efficiency of clone selection and the ease of false positive screening, quickly and easily screening out nearly all false positives with simple plate assays.
- The decrease in false positives will reduce the number of liquid assays required to identify proteins that have an interaction.
- In addition, plasmid-loss tests are made faster and simpler by using counter-selectable URA3 and ADE2 markers.

Tech Fields

- Research Tools : Protein interactions & function

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854