

Protein Interaction Services

We identify binding partners
for any type of protein



Profit from our yeast two-hybrid services

- Identify novel interactors of your protein of interest
- Characterize binary protein interactions
- Define binding motifs by domain mapping

DUALhybrid screening services

The service that meets highest expectations

Our highly optimized DUALhybrid technology attacks the two major pitfalls of the classical two-hybrid system: false positives and false negatives.

Using our triple yeast reporter strain we set a high level of stringency. Our mating-based library transformation approach guarantees highest coverage rates (> 10 x library complexity) resulting in exhaustive, reproducible screenings. State-of-the-art normalized libraries further decrease false positive rates and enable detection of rare interactors. With our data filtering tool we remove sticky proteins and our bait-dependency test verifies that the screening results are experimentally reproducible and therefore specific.

We guarantee

- Libraries of the highest complexity
- Exhaustive library screening
- Delivery of 30 interactors per screen on average
- Flagging of sticky proteins
- Best value for money on the market
- 95% customer satisfaction



Our satisfied customers say...



«I have used Dualsystems services for several yeast two-hybrid screens. I am very satisfied with the excellent service and I have repeatedly recommended the company to my colleagues and collaborators.»

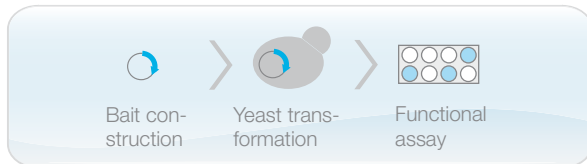
Nicolas Ruggli, Dr. med.vet., Institute of Virology and Immunoprophylaxis, Mithelhäusern, Switzerland

«You picked up some very important and relevant interacting proteins which will clearly lead to publications»

Prof. David Schubert, The Salk Institute for Biological Studies, Cellular Neurobiology, San Diego, CA, USA

■ DUALhybrid service procedure

Part I: Bait construction and analysis

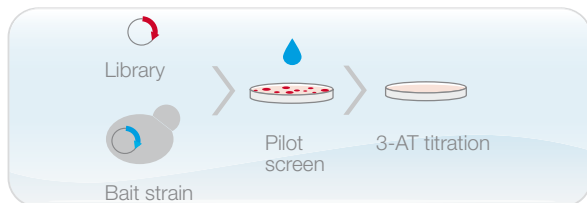


Advantages

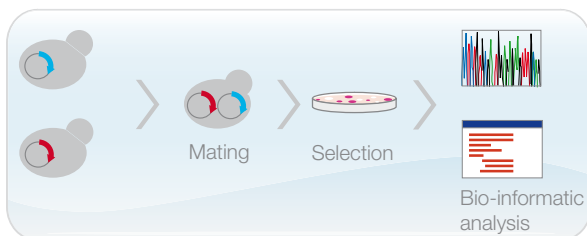
- N- and C-terminal bait vectors to decrease frequency of self-activating baits
- Highly sensitive functional assay to verify bait expression and localization

Part II: Library screen and clone analysis

Optimization of screening conditions: the bait is carefully optimized using a series of pilot screens



The bait is screened against a cDNA library of your choice using either high efficiency mating or sequential transformation



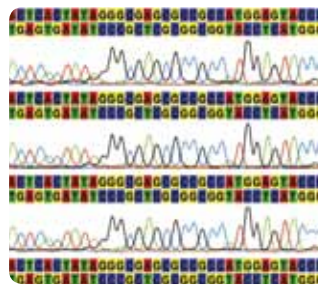
Advantages

- Triple yeast reporter strain (*HIS3*, *ADE2*, *LacZ*) to decrease false positive rates
- High efficiency mating guarantees complete cDNA library coverage
- Normalized cDNA libraries decrease false positive rates and enable detection of rare interactors
- Semi-quantitative liquid LacZ assay to determine the strength of an interaction

Deliverables

- 5' end sequences of all positive clones
- Clone analysis, including BLAST search results and clone grouping according to confidence level
- Complete report

Data filtering and clone ranking



Using sophisticated bio-informatic analysis tools we compare your screening results with a comprehensive background data base to eliminate highly connected false positive interactors. All interactors are ranked according to the quality of the interaction (confidence level).

■ Option

Verification of positive interactions using a bait dependency test

All prey clones of interest are isolated and re-transformed into yeast together with the original bait and an unrelated control bait. Only bait-dependent interactions are scored as positive.

Interested?

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■ Additional Services

Testing of pairwise interactions

- Pairwise interaction assay to determine whether two proteins interact directly
- Interaction domain mapping
- Comparative interaction studies between wild type and mutant variants of a protein
- Fast and simple service
- Up to 96 interactions tested in parallel



■ Our satisfied customers say...

«We have used Dualsystems' screening services and we have found the support very competent and helpful. Regular updates and scientific assistance were provided throughout the screen.»

Monica Gotta, Associate Professor, University of Geneva, Switzerland

«We got interesting results which provided good leads to go on...»

Smiljka Vikić-Topic, M.Sc., Contract Research Manager, Research Management Office, PLIVA Pharmaceutical Industry Inc.

■ List of all cDNA libraries

Human Tissue

normalized universal | normalized brain | brain (fetal) | bone marrow | colon | heart | kidney | leukocytes | liver | lymph node | ovary | pancreas | placenta | skeletal muscle | small intestine | spleen | testis

Human Cell Lines

normalized HeLa S3 cells | HeLa | hepatocellular carcinoma cells | keratinocytes | LNCaP prostate cancer cells

Mouse

normalized universal | normalized brain | brain | embryo 11 days | embryo 17 days | testis | normalized mouse embryonic stem cell

Rat

liver

Microorganisms

E. coli: genomic library

Model Organisms

Drosophila: normalized *Drosophila* universal | whole animal | whole embryo

Arabidopsis thaliana: normalized *Arabidopsis* universal | *Arabidopsis* mixed tissues | green vegetative tissue

C. elegans: whole animal

S. cerevisiae: whole organism



No appropriate library? Please inquire about our custom cDNA library construction service!

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