



Yeast surface display: High-end protein engineering

Yeast surface display represents a powerful protein engineering technology, enabling a wide range of applications including the generation of novel antigen binding sites (also in non-antibody proteins), affinity maturation, construction of pH-dependent binding sites and protein stabilization, among many others.

BACKGROUND

Engineered proteins are key components of a wide range of therapeutics and diagnostics. *In vitro* directed evolution of proteins by using yeast surface display comes with several critical advantages such as the eukaryotic expression machinery, quantitative sorting, precise control over selection conditions, etc. These sophisticated yeast surface display selection campaigns enable high-end protein engineering tasks, which would not be possible with standard techniques such as the hybridoma technology.

TECHNOLOGY

Our **well-established yeast surface display workflows**, together with novel state-of-the-art instruments (flow cytometers, SPR, SEC-HPLC, etc.) at BOKU University, enable a range of applications including:

- Generation of novel antigen binding sites (in antibody- or non-antibody-based proteins)
- Affinity maturation of existing protein-protein interactions
- Engineering pH-dependent binding sites
- Protein stabilization (i.e. "repairing" unstable, poorly expressed proteins)
- Epitope mapping
- Specific recognition of certain antigen conformations/states

Let us help you by developing targeted biotherapeutics (mAbs, BiTEs, CAR T cells, etc.), improve the performance and cost efficiency of diagnostic assays, create novel biosensors, improve the shelf life of your proteins, understand how proteins interact with each other and many other applications!

OFFER

Under protection of a CDA/NDA **we engineer proteins with ideal properties specifically tailored to your needs**. These engineering campaigns can be used for (i) a multitude of different proteins to be engineered and (ii) for a wide range of desired biochemical features (see above). IP developed in such a project will fully belong to our industrial partner. Don't miss out on the opportunity to harness the capabilities of our yeast surface display technology to streamline your development. Reach out to acib to explore new partnership opportunities!

acib-EXPERTS:

Priv.-Doz. Dr. Michael Traxlmayr

DEVELOPMENT STATUS:

TRL 4 (technology validated in lab)

IPR:

Can be generated for our industrial partners / investors

KEYWORDS:

Yeast Surface Display
Efficient Screening
Optimized Selection
Directed Evolution
Antibody Engineering
Tailored proteins
CAR T Cells
Targeted Biotherapeutics
Contract Research Services

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