

PRESS RELEASE

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ProteoY Generates and Expresses a 280 kDa Protein in Just One Week Without Any *E. coli* Cloning Step

ProteoY today announced a significant milestone in the validation of its proprietary yeast-based protein expression platform, successfully generating and expressing the **Glideosome-Associated Connector (GAC)** protein, a complex protein of approximately **280 kDa (2680 a.a.)**, in just **seven days from DNA sequence to expressing clone**. The yield of the soluble purified protein was approximately 5 µg/ml.

Importantly, the process was completed **without any intermediate *E. coli* cloning or amplification step**, demonstrating a streamlined workflow that significantly reduces the time and complexity traditionally associated with recombinant protein development.

The GAC protein is a large and structurally complex protein involved in the motility and host-cell invasion mechanisms of parasitic organisms. Proteins of this size are widely recognized as challenging expression targets due to difficulties related to cloning, stability, folding, and cellular production.

Using its proprietary yeast technology, ProteoY was able to move directly from DNA sequence to an expressing yeast clone within one week, validating both the speed and flexibility of the platform.

"Achieving expression of a 280 kDa protein in only seven days, while completely bypassing conventional *E. coli* cloning workflows, represents an important validation of our technology," said Marco Geymonat.

"Our goal is to dramatically shorten the path from gene design to recombinant protein production. This result demonstrates that even complex protein targets can be addressed using a rapid and simplified development process."

Traditional recombinant protein workflows often require multiple cloning, amplification, verification, and transfer steps through bacterial hosts before expression can begin. ProteoY's platform eliminates these bottlenecks by enabling the direct generation of expressing yeast clones from a DNA sequence, accelerating development timelines from weeks or months to days.

This achievement further strengthens the growing body of evidence supporting the ProteoY platform. The company has already supplied recombinant protein production strains and services to organizations including the CEA, CNRS, and research groups associated with the University of Cambridge. ProteoY is currently expanding its activities across biotechnology, industrial biomanufacturing, enzymes, research reagents, and future therapeutic applications.

Key Highlights

- Expression of a 280 kDa recombinant protein
- Expressing clone generated in one week
- No *E. coli* cloning or amplification step
- Direct transition from DNA sequence to expressing yeast clone
- Demonstration on a highly complex eukaryotic protein target
- Scalable platform for research and industrial biotechnology applications

About ProteoY

ProteoY is a biotechnology company developing a next-generation yeast platform for recombinant protein production. Built around a proprietary high-performance host strain, the technology enables rapid generation of protein-producing clones directly from DNA sequences. ProteoY's mission is to accelerate access to recombinant proteins by reducing development time, simplifying workflows, and enabling the production of complex protein targets for research, industrial biotechnology, and healthcare applications.

Press contacts

Marco Geymonat : CTO

 contact@proteoy.com |  www.proteoy.com