Rapid expression of SARS-CoV-2 glycoproteins

We have developed a system that allows a rapid high-quality expression of SARS-CoV-2 (glyco) proteins for vaccine design and serological detection. We provide targeted glycosylation.

BACKGROUND

COVID-19 demands rapid responses. Thus, the **fast delivery** of targets like recombinant viral proteins for the design of efficient vaccines and serological detection tools is critical. In this context the SARS-CoV-2 spike protein (SP) is a primary candidate. SP is a heavily glycosylated protein and glycans are an important measure of the proteins` quality.

TECHNOLOGY

We have developed a eukaryotic (plant-based) expression system that enables the rapid and scalable production of recombinant (glyco-) proteins. An important quality attribute of the system is the modulation of glycosylation profiles. The approach relies on the use of a transient expression system that allows purification of recombinant proteins one week after delivery of the expression construct into plant leaves. Targeted N-glycosylation is achieved by the co-expression of semi-synthetic glycosylation modules in glyco-engineered production lines. Using this highly flexible platform a series of defined N-glycan modifications can be generated on demand on recombinant glycoproteins.

OFFER

We offer the rapid expression of high-quality recombinant SARS-CoV-2 (glyco-) proteins with targeted glycosylation used for the design of serological detection tools and efficient vaccines.

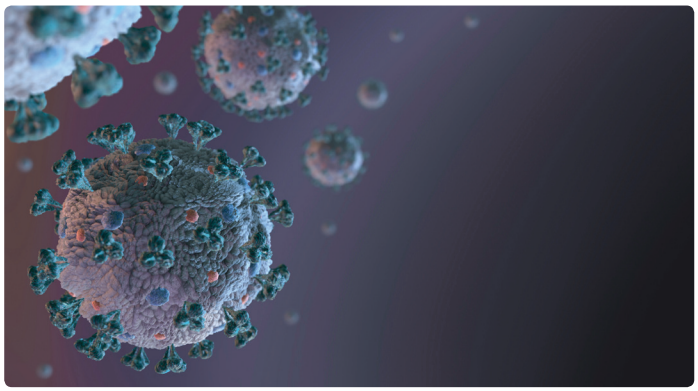

Image: Freepik.com

EXPERTS

Herta Steinkellner
Richard Strasser

AVAILABLE FOR

- Joint Research Project
- Contract Research
- COMET Funding call

DEVELOPMENT STATUS

TRL 2

KEYWORDS

- SARS-CoV-2
- COVID-19
- Recombinant SARS-CoV-2 proteins
- Engineered glycosylation

CONTACT

acib GmbH, Krenngasse 37, 8010 Graz
+43 316 873 9316
bd@acib.at
www.acib.at