



CAP[®]Go
CELL-BASED EXPRESSION SYSTEM
FOR TAILOR-MADE GLYCOPROTEINS

CAP[®]Go

cevec 



CAP[®]Go Cell-Based Expression System for Tailor-Made Glycoproteins

Tailor-made glycosylation of recombinant proteins

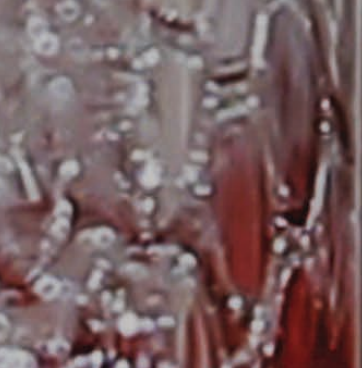
CEVEC introduces the 2nd generation of its successful human CAP[®] cell line: the CAP-Go Cell-Based Expression System, the new standard to obtain the desired activity and pharmacokinetic properties of therapeutic proteins.

The CAP-Go Cell-Based Expression System is a comprehensive panel of CAP derived suspension cell lines specifically designed to optimize the structure of N- and O-linked glycans.

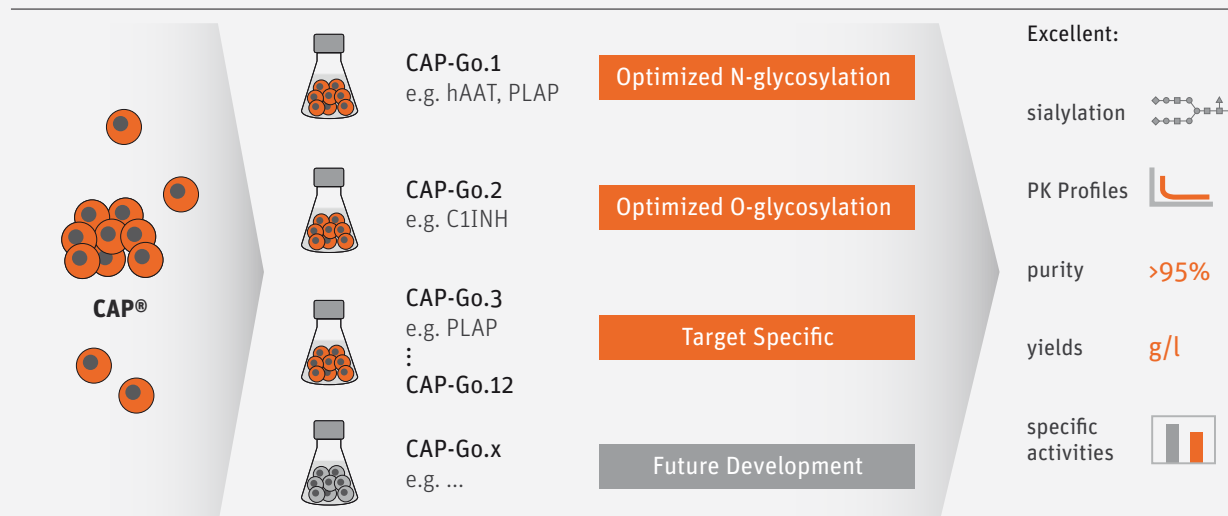
There is an increasing need for the recombinant production of complexly glycosylated molecules such as coagulation factors or other plasma proteins. Expressed on conventional platforms like CHO or 293 cells, the recombinant proteins often do not match glycosylation and pharmacokinetic profiles of their plasma-purified counterparts. These issues are solved by the CAP-Go Cell-Based Expression System, which provides high level expression of complex glycoproteins with pharmacokinetic properties equal or superior to the plasma derived proteins. By selecting the appropriate specific cell line from our comprehensive portfolio of glyco-optimized CAP-Go cell lines, the N- or O-linked glycan patterns can be tailored to the specifications of your product.

Key Advantages of CAP[®]Go Technology

- Authentic human glycosylation for complex proteins
- No immunogenic non-human carbohydrate residues
- High specific activity
- Up to 10 times higher titer than conventional cell lines
- Minimal product aggregation at increased yields
- Cost effective large scale production
- Consistent protein quality resulting in reduced downstream costs
- Minimal batch-to-batch variations



CAP®Go Technology: Better glycosylation than ever



Portfolio of Glyco-Optimized CAP®Go Cell Lines

Choose one from our comprehensive panel of CAP-Go cell lines for expressing glycoproteins with:

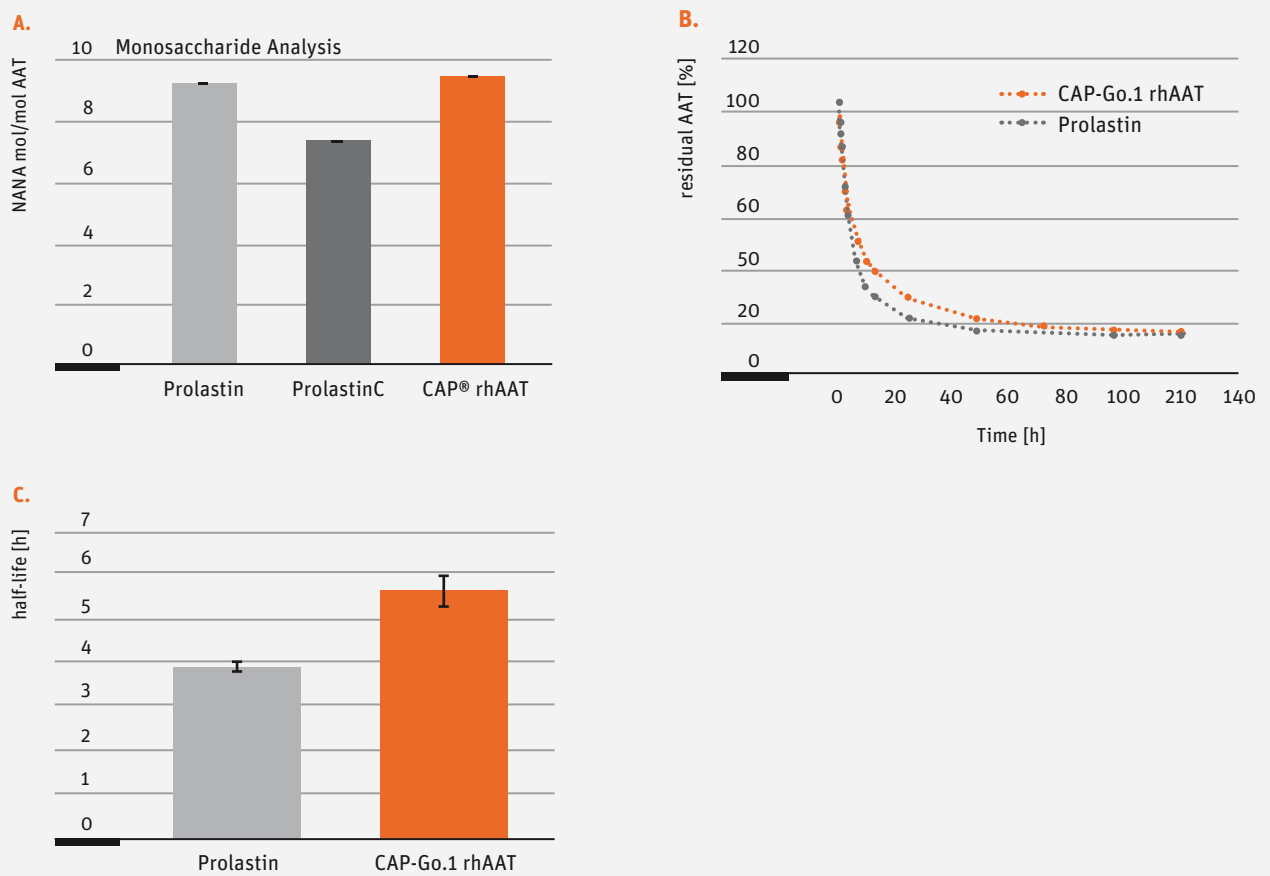
- Enhanced sialylation for increased half-life
- Reduced antennary fucosylation
- High degree of galactosylation of N-glycans
- High or low N-glycan antennarity as required
- Homogenous, defined O-glycosylation patterns
- Human plasma identical glycans
- Proper folding and secretion

CAP[®]Go.1

for Improved Glycosylation of N-Glycans

Glyco-optimized human recombinant alpha1-antitrypsin (rhAAT) from CAP-Go.1 cells outperforms serum purified rhAAT (Prolastin) in a rat pharmacokinetic study.

Glyco-optimized rhAAT produced in CAP[®]Go.1 cells



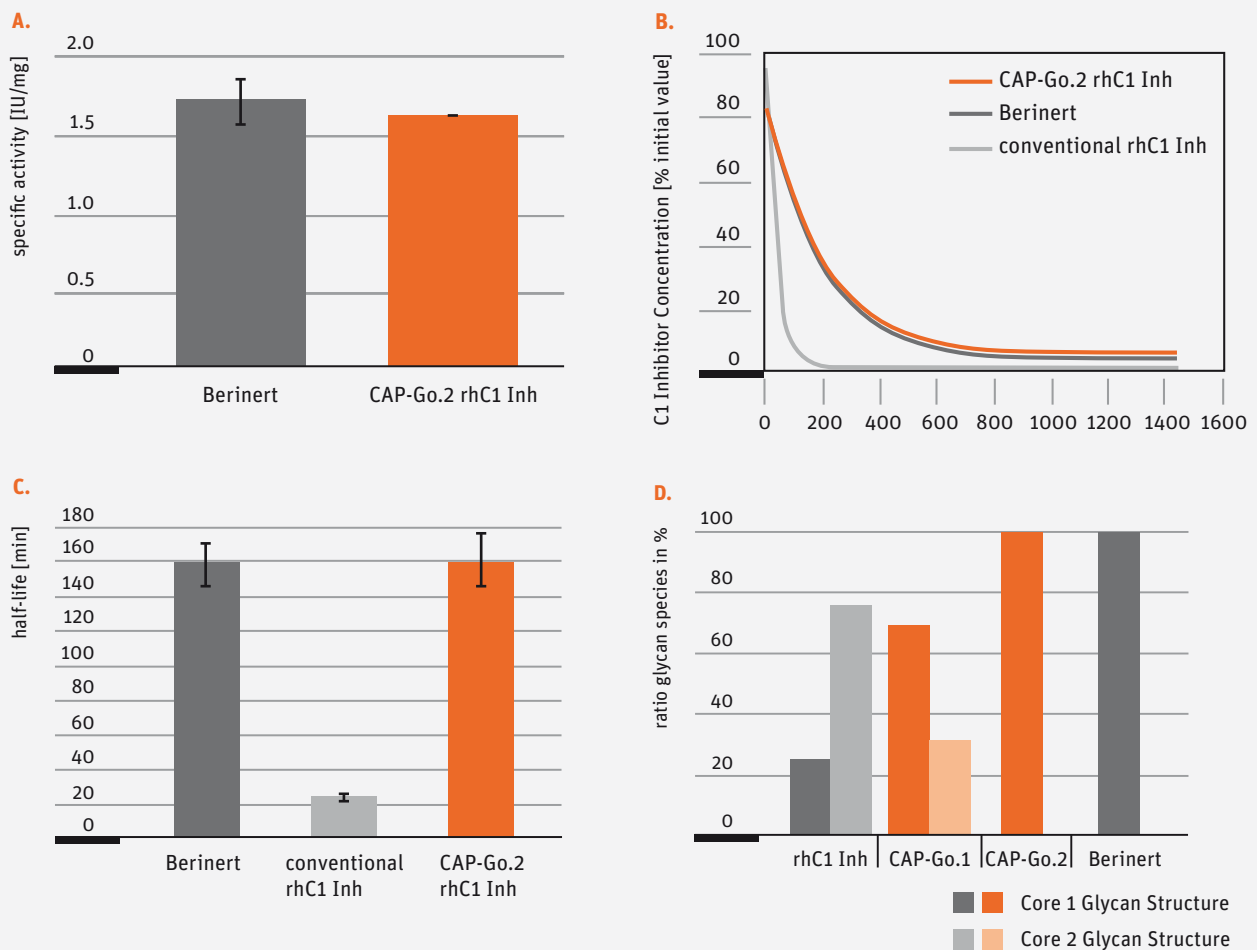
- A.** Sialic acid content of rhAAT produced from CAP-Go.1 cells was compared to the plasma-derived products Prolastin and ProlastinC.
- B.** hAAT pharmacokinetics comparing rhAAT produced from CAP-Go.1 cells to Prolastin in a rat PK study.
- C.** Serum half-life of rhAAT produced in CAP-Go.1 cells compared to Prolastin. Data from same PK study as in B.

CAP®Go.2

for Improved Structure of O-Glycans

The only recombinant human C1 Inhibitor (rhC1 Inh) with serum half-life matching PK profile of serum purified C1 Inh (Berinert).

High quality C1-Inh with high specific activity produced in CAP®Go.2 cells

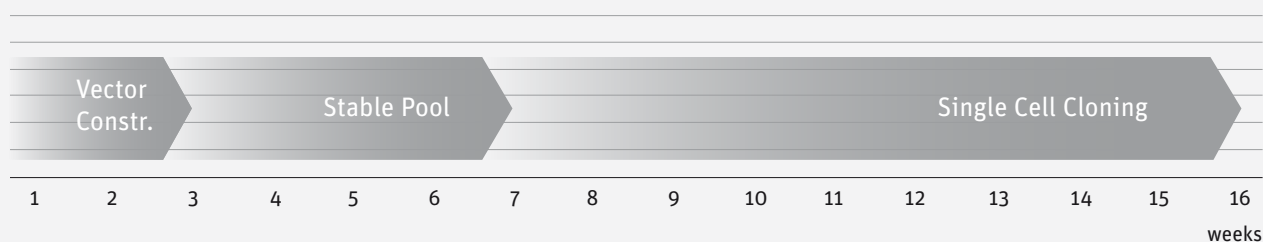


- A.** Specific activity of rhC1 Inh produced in CAP-Go.2 was compared to commercially available preparation of serum purified C1 Inh (Berinert).
- B.** Residual C1 Inh was analyzed in the serum of rats injected with conventional recombinant hC1 Inh, rhC1 Inh produced in CAP-Go.2 cells or Berinert.
- C.** Serum half-life of conventional recombinant hC1 Inh, rhC1 Inh produced in CAP-Go.2 cells or Berinert. Data from same PK study as in B.
- D.** Comparison of O-glycan structures of different C1 Inh preparations used in PK study.

Cell Line Development in CAP®Go Cells

The service combines CEVEC's proprietary CAP-Go Cell Based Expression System with optimized vector construction, serum-free cell line generation and process development using our customized, chemically defined CAP-Media.

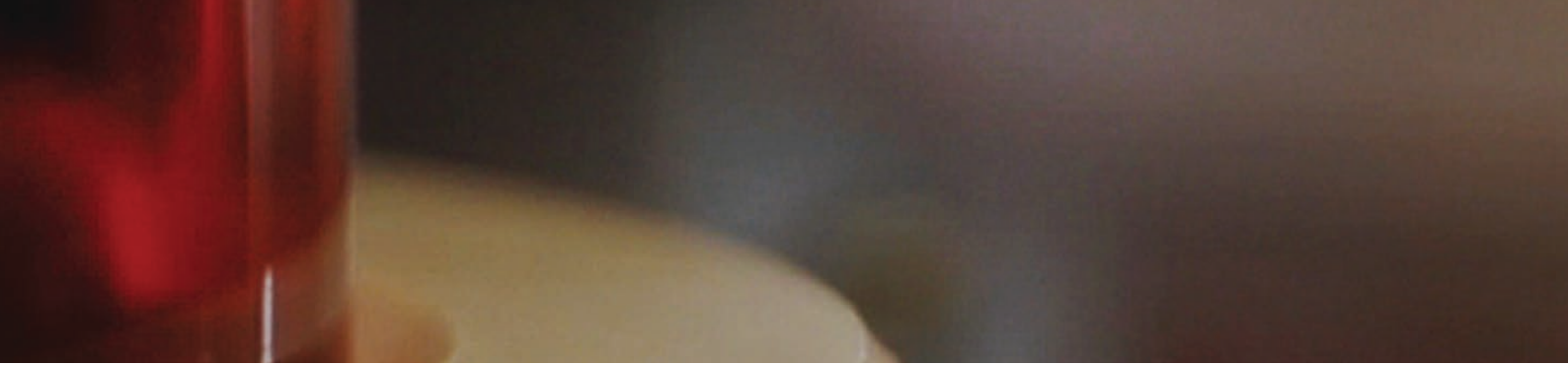
Typical Timelines



CAP-Go derived clinical material can be provided for Phase I-II studies and we produce your protein through our CAP-CMO Joint Venture with Genlbet in Lisbon/Portugal.

Based on our CAP® Technology platform we perform

- cGMP Master and Working Cell Bank production
- Process development
- cGMP bulk protein production
- Quality control / quality assurance services
- Fill and finish
- Support of dossier filing with regulatory authorities



CEVEC Pharmaceuticals GmbH commercializes its proprietary human cell expression technologies to provide new solutions for the manufacturing of safe and efficient biopharmaceuticals with authentic human post translational modification patterns, e.g. glycosylation.

For further information please contact:

CEVEC Pharmaceuticals GmbH

Gottfried-Hagen-Str. 60-62 | 51105 Köln | Germany

Phone +49 (0)221 46 02 08 00 | E-Mail info@cevec.com

For business development please contact:

bizdev@cevec.com | www.cevec.com

All information provided is for the purpose of presenting CEVEC and its technology. All information provided is given to CEVEC's best knowledge and shall not create any guarantee, representation, warranty or liability of any kind, express or implied. Any claims concerning this information shall be governed and construed in accordance with the laws of Germany, excluding its conflicts of law principles.

CAP® is a trademark of CEVEC Pharmaceuticals GmbH. © 2014, all rights reserved. All trademarks are owned by their respective companies.

CEVEC Pharmaceuticals GmbH

Gottfried-Hagen-Str. 60-62

51105 Köln | Germany

Phone +49 (0)221 46020800

E-Mail info@cevec.com

www.cevec.com

