

GlycoExpress®

Toolbox for high yield production of human glyco-optimized biopharmaceuticals



GlycoExpress® (GEX®) is approved by **FDA, EMA** and German regulatory authorities **PEI** and **BfArM** for manufacturing of biopharmaceuticals. GEX® is a screening and production platform of proprietary glyco-optimized human cell lines for development and production of biotherapeutics with authentic human optimized glycosylation.

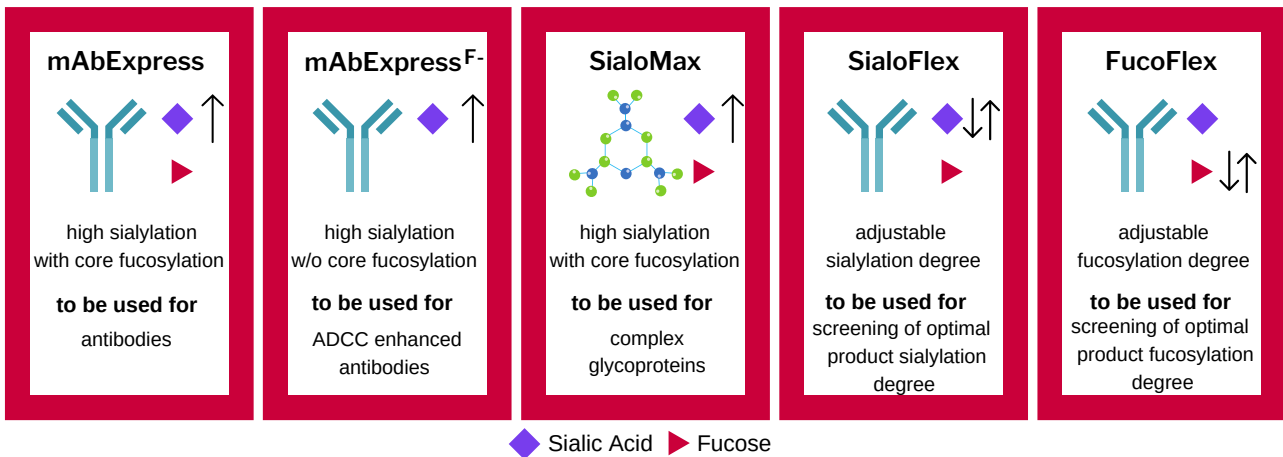
Expression of human protein-based biopharmaceuticals requires a biological system close to its human origin. FyoniBio provides a well-established and extensively characterized human expression technology platform for all proteins.

With GEX®, we are able to modify and **control posttranslational modifications**, with glycosylation, being our main expertise. Proper glycosylation as a key feature of biotherapeutics has strong effects on bioactivity, solubility, stability, serum half-life and immunogenicity.

Key Features GlycoExpress® Cell Lines

- Human cell lines with stable expression
- Authentic human glycosylation for complex proteins
- No immunogenic non-human carbohydrate residues
- Toolbox of glyco-optimized cell lines: adjustment of sialylation, fucosylation, and mannose-6-phosphate
- Platform manufacturing process with reliable outcome, stable product quality, esp. glycosylation and minimized batch-to batch variations
- High productivity for glyco-optimized products

Explore our Broad Toolbox of Glyco-Optimized GEX® Cell Lines



Expression Platform for Different Biopharmaceuticals

- Antibodies of different isotypes (e.g., IgG, IgM, IgA)
- Defucosylated antibodies
- Bispecific antibodies / antibody fragments (e.g., NK-cell / T-cell recruiters)
- Difficult-to-express and complex glycosylated proteins (e.g. rhSP-D and others)
- Blood factors (e.g., FVII)
- Protein hormones (e.g., FSH, HCG)
- Fusion proteins with extended serum half-life
- Enzymes (e.g., for enzyme replacement therapy)



Further glyco-optimized cell lines are continuously developed e.g. for the production of glycoproteins with high amount of mannose-6-phosphate for enzyme replacement therapy.

Preclinical Manufacturing of Protein Biopharmaceuticals

We provide preclinical CMC services for your biopharmaceutical products:

- Design and cloning of molecules e.g., antibody engineering or half-life prolongation
- Cell line development using the appropriate GEX® cell line
- Bioprocess development (USP)
- Protein purification and downstream processing (DSP)
- Bioactivity assays
- PTM analytics

Yields for Selected Product Types

| Product Class | Productivity* |
|--------------------------------|---------------|
| IgG (high and low core-fucose) | 15-30 g/l |
| IgA | 10-15 g/l |
| IgM | 3 g/l |
| Glycoprotein | 2 g/l |

*In a 40 day perfusion run

The FyoniBio team is glad to support you throughout your projects

FyoniBio offers high quality ISO-9001 compliant services. For more information please contact us.



FyoniBio
www.fyonibio.com

📍 Robert-Roessle-Str. 10
13125 Berlin, Germany

☎ +49 (0) 30 9489 2500
✉ contact@fyonibio.com

