



## GlycoExpress®

### Toolbox for High Yield Production of Human Glyco-Optimized Biopharmaceuticals

The expression of human protein-based biopharmaceuticals requires a biological system closely resembling its human origin. Thus, proper glycosylation, a key feature of biotherapeutics, strongly influences bioactivity, solubility, stability, serum half-life, and immunogenicity.

FyoniBio offers **GlycoExpress® (GEX®)** — a well-established and extensively characterized human screening and expression technology platform suitable for a broad range of proteins.

GEX® contains proprietary glyco-optimized human cell lines designed for the development and production of biotherapeutics with authentic human-optimized glycosylation patterns, ensuring no immunogenic, non-human carbohydrate residues.

Our platform manufacturing process ensures reliable outcomes, stable product quality, especially in glycosylation, and minimized batch-to-batch variations. Additionally, we achieve high productivity for glyco-optimized products.



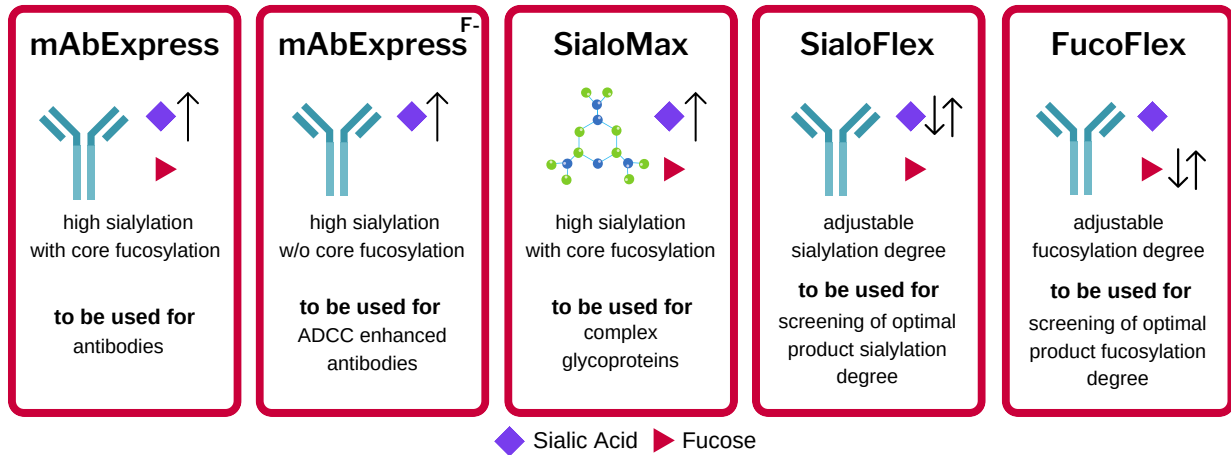
With GEX®, we can modify and control post-translational modifications, with glycosylation being our main expertise among others.

### Our GlycoExpress® Toolbox:

- **mAbExpress:** for optimized antibody glycosylation
- **mAbExpress (F-):** for optimized antibody glycosylation with a lack of core-fucose for ADCC enhancement
- **SialoMax:** for high sialylation and high core fucosylation
- **SialoFlex:** for adjusting sialylation
- **FucoFlex:** for adjusting fucosylation

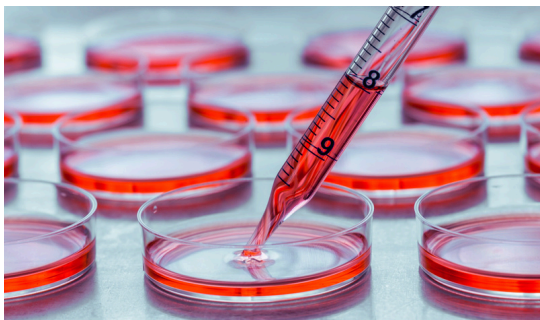
GlycoExpress® is approved by the **FDA**, **EMA**, and German regulatory authorities, including the **PEI** and **BfArM**, for the manufacturing of biopharmaceuticals.

## 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 being developed, for example, for the production of glycoproteins with a high amount of mannose-6-phosphate for enzyme replacement therapy.

### Preclinical Manufacturing of Protein Biopharmaceuticals

FyoniBio provides 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 most suitable 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 All Set to Bring Your CMC Project to the Next Level!

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



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