



# Cell Line Development

Select the Most Suitable Host Cell for Each Individual Biopharmaceutical



The quality and potency of a protein can vary a lot depending on the cell production system used. Choosing the right expression host is key to getting the product characteristics you want.

At FyoniBio, we conduct state-of-the-art cell line development to generate high-production cell clones with excellent quality parameters. FyoniBio's **GlycoExpress®** and **CHOnamite®** platforms enable the selection of the most appropriate host cell line. Our customized feasibility study offers a comparison of protein expression features in both platforms at efficient costs. We offer flexible, royalty-free licensing models.

**GlycoExpress® (GEX®)** is a screening and high-yield production platform of proprietary glyco-optimized human cell lines for the development and production of complex biotherapeutics with fully human post-translational modifications (PTMs), such as glycosylation.

**CHOnamite®** is our versatile CHO platform composed of various CHO cells, such as CHO-K1, CHO-GS-KO, and CHO-DG44. This technology enables high-yield production of antibodies, complex recombinant proteins, and biosimilars.

## Characteristics & Selection Criteria

### CHOnamite®

- Versatile platform originating from CHO-K1, CHO-GS-KO, and CHO-DG44 cell lines.
- High-yield, stable, and robust production in fed-batch processes
- Achieving titers of up to **12 g/L** by including our potent Transposase technologies
- Suitable for standard mAbs, biosimilar development, and complex mammalian proteins
- Early integration of PTM/glycan analytics into the CLD procedure is possible

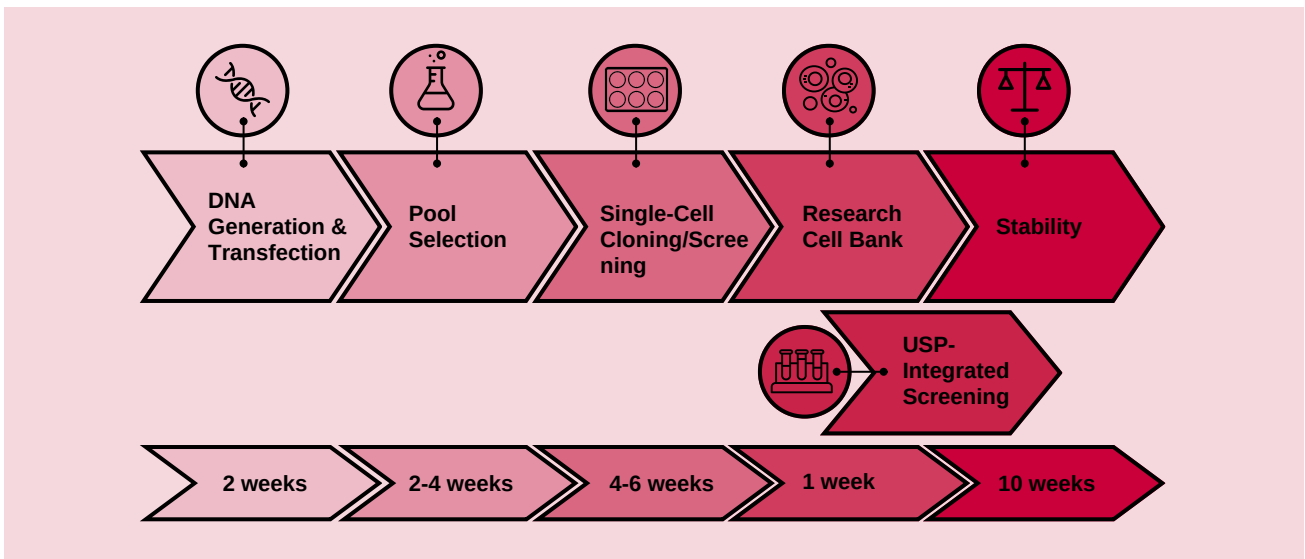
### GlycoExpress®

- Genuine human glycosylation
- High productivity for glyco-optimized products
- Toolbox of glycoengineered cell lines: **SialoFlex/Max** for adjustment of sialylation, **FucoFlex** for adjustment of fucosylation, and **ManFlex** for mannose-6-phosphate adjustment
- Established expression platform for difficult-to-express, complex glycoproteins, and defucosylated proteins



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## Fast-track Cell Line Development



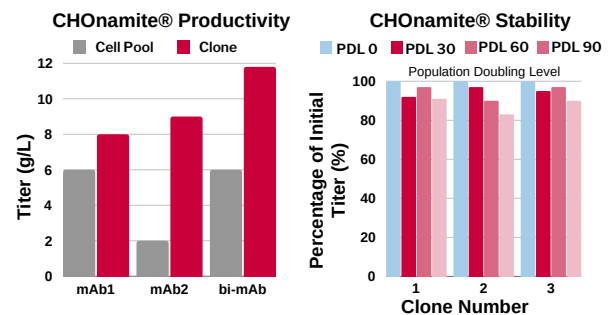
Acceleration of cell line development is key for cost-efficiency and competitiveness in clinical development of biopharmaceuticals. At FyonBio, we combine potent expression cell lines, efficient selection systems, thoroughly-designed expression vectors and a state-of-the-art transposase system to generate clones with highest productivity. Integrating process development early on in cell line development ensures the probability of selecting most productive clones at the desired timelines.

Typically, single cell cloning starts with multiple highest producing pools bringing forth clones with varying traits. Multiple clone screening rounds are performed starting with initial plate well screening up to a USP integrated selection process in batch and fed-batch modes using suitable down-scale models to directly define robust process parameter to select the lead monoclonal cell line under the consideration of robust manufacturing criteria.

**Stability testing** and the possibility for **early USP optimization** completes cell line development and enables a smooth transfer of the RCB to a GMP manufacturer.

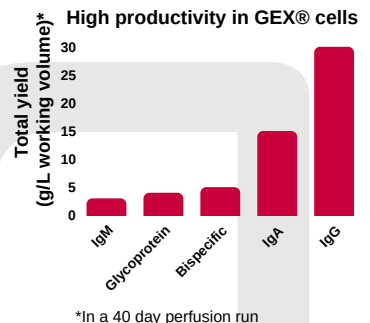
## Reliable, High-Producing, Glyco-optimized and Stable Cell Lines

**CHOnamite®** cell lines enable superior high yield productivities: **2-6 g/L on pool level** and **up to 12 g/L on clone level**.



### Glyco-optimized

**GEX®** cell lines are optimized for perfusion processes characterized by high reproducibility, scalability and product quality.



## The FyonBio Team Is All Set to Bring Your CMC Project to the Next Level!

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



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