

## CHOFlow®

### CHO Expression Platform for ADCC Enhanced Antibodies and Beyond



**CHOFlow®** is our own glycoengineered cell line for afucosylated mAbs and other biopharmaceuticals.

**CHOFlow®** unifies excellent productivity rates (> 5 g/L) and exceptionally stable and robust production processes of our CHOnamite® host cell line with a proven genetic *FUT8* knock-out (KO) glyco-optimization strategy. This allows FyoniBio to develop cell lines that produce our customer's mAb candidates with enhanced ADCC effector function to significantly improve the therapeutic efficacy of the mAbs.

The core fucosylation of mAbs can be considered as a prominent critical quality attribute (CQA) as it directly affects the affinity of the mAb to the FcγRIIIa receptor on natural killer cells and thus is influencing the biological activity through immune effector functions. A reduction of mAb's core fucose directly increases binding affinity to the FcγRIIIa receptor and thereby enhancing the ADCC activity leading to increased killing of target cells.

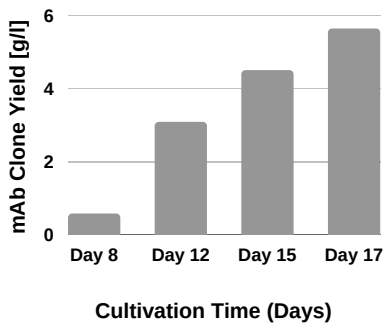
### CHOFlow® : Enhanced Potency meets Outstanding Manufacturability

- Glyco-engineered CHO-K1 *FUT8* KO cell line producing mAbs lacking the 1,6 linked fucose on N-glycans to enhance ADCC effector function
- Excellent productivities of > 5 g/L in FyoniBio's platform fed-batch production processes while minimizing batch-to-batch variations
- Maintains outstanding stability over more than 70 population doublings
- **CHOFlow®** is ideal for production of afucosylated mAbs to significantly improve the therapeutic efficacy in cancer immune therapy

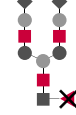
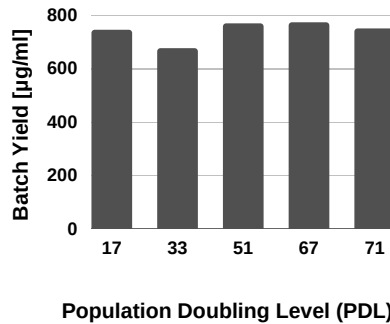
## Explore Manifold Possibilities of our CHOFlow® Cell Line



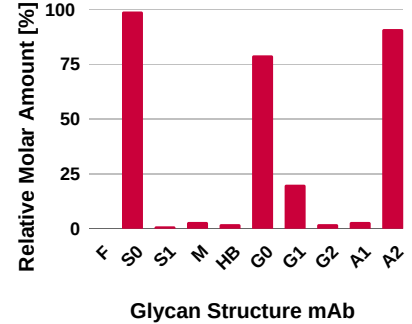
Established  
High Yield Processes



Excellent  
Long-term Stability



Lack of  
Core-Fucosylation



### CHOFlow® for Robust and High Production of Afucosylated mAbs

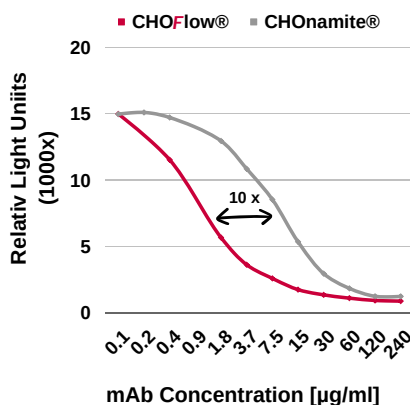
- Excellent productivity of > 5 g/L in our standard fed-batch process
- Proven robust stability over more than 70 population doublings to meet GMP requirements
- mAb N-glycans lacking core fucose while the other N-glycan structures are not affected

### CHOFlow® Improves FcγRIIIa Binding and mAb Potency

- Significantly improved ADCC due to enhanced binding affinity to FcγRIIIa by factor 10
- Increased potency and therapeutic efficacy
- Especially suited for low receptor density target cells and the low affinity variant of the FcγRIIIa (F variant)
- Allows the reduction of treatment dosage requirements at maintaining the therapeutic effect

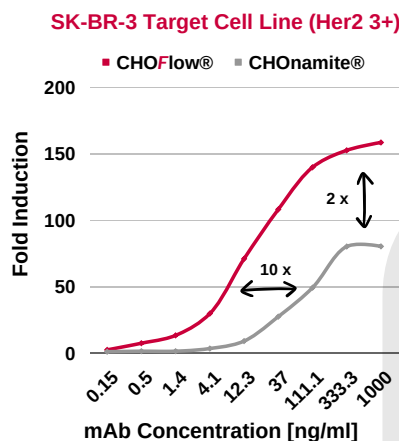
#### Fc gamma Receptor Binding Assay\*

\*FcγRIIIa targeted by Trastuzumab

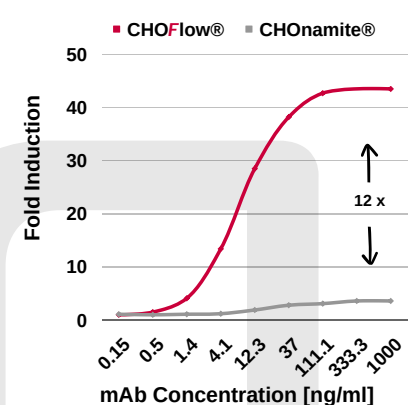


#### ADCC Reporter Bioassay\* F Variant

\*Her2 targeted by Trastuzumab



MCF-7 Target Cell Line (Her2 1+)



The FyoniBio team is glad to advance  
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



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