Advanced CHO Cell Expression System for Increased Transient Protein Production

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Abstract

The growing need in the biopharmaceutical market for various recombinant proteins and antibodies produced in a short time requires an efficient and flexible system. Transient expression is a commonly used process to face this demand but is unfortunately limited by transfection efficiency and inherent productivity, especially with CHO cells. To overcome this issue, we developed an advanced transient expression system consisting in the synergistic association of a novel CHO chemically defined medium and a powerful transfection reagent. First, we show that this innovative medium allows easy cultivation of various strains of CHO cells without the need of an extensive sequential adaptation. In a second time, through the protocol optimization of a technologically advanced transfection solution, we demonstrate a major increase in our recombinant proteins yields.

Direct and Effortless Adaptation of CHO cells in FectoCHO® CD Expression Medium

**Figure A**

CHO cell Medium Optimization: FectoCHO® CD Expression Medium

**Figure B**

Increased Protein Productivity with FectoCHO® Expression System

**Figure C**

Remarkable Transfection Efficiency

**Figure D**

Reproducibility and Adaptability of FectoCHO® Expression System

**Figure E**

Conclusion

- **FectoCHO® CD** is optimized for a direct adaptation and cultivation of CHO-S, CHO-K1 and ExpICHO®-S cells
- **FectoCHO® CD** allows optimal cell growth with a constant doubling time and a sustained viability
- **FectoPRO®** together with FectoCHO® CD Expression Medium greatly increase protein productivity in CHO cells
- Easily adaptable from shaker flask to stirred tank bioreactor
- Great lot to lot reproducibility and reliability