

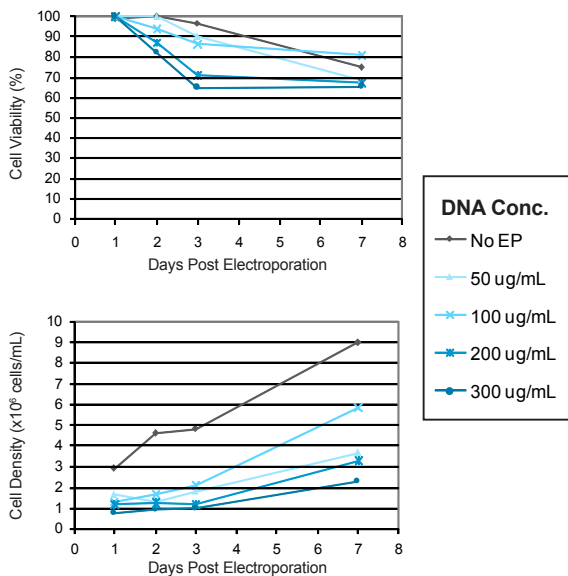
Transfection to the N^{th} Power.

CAP-T[™] Protein Production

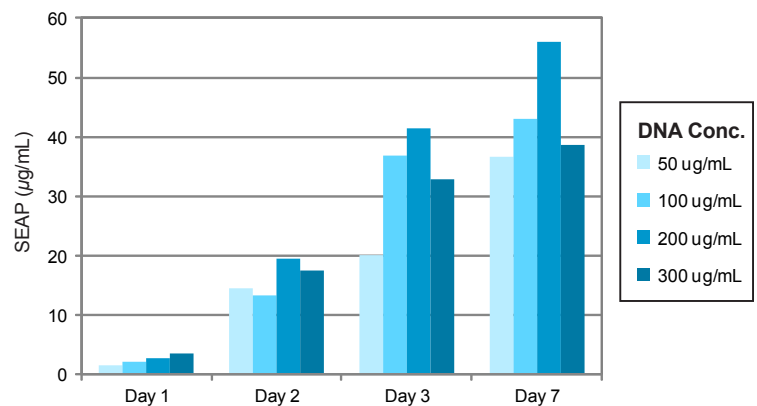
High Yield Expression of Proteins in Human-Derived Cells Protein Production with Authentic Human Post-translational Modifications

What if you could rapidly produce proteins with authentic human post-translational modifications?

The MaxCyte[®] STX[™] Scalable Transfection System in conjunction with CEVEC CAP-T[™] protein expression technology provides a fully scalable transient transfection method for rapidly producing proteins in human-derived cells. MaxCyte flow electroporation transfects up to 1×10^{10} CAP-T suspension cells in less than 30 minutes with high cell viability and transfection efficiency. This enables high yield production of complex proteins containing authentic glycosylation and sialylation within weeks without the time and cost of creating stable cell lines.

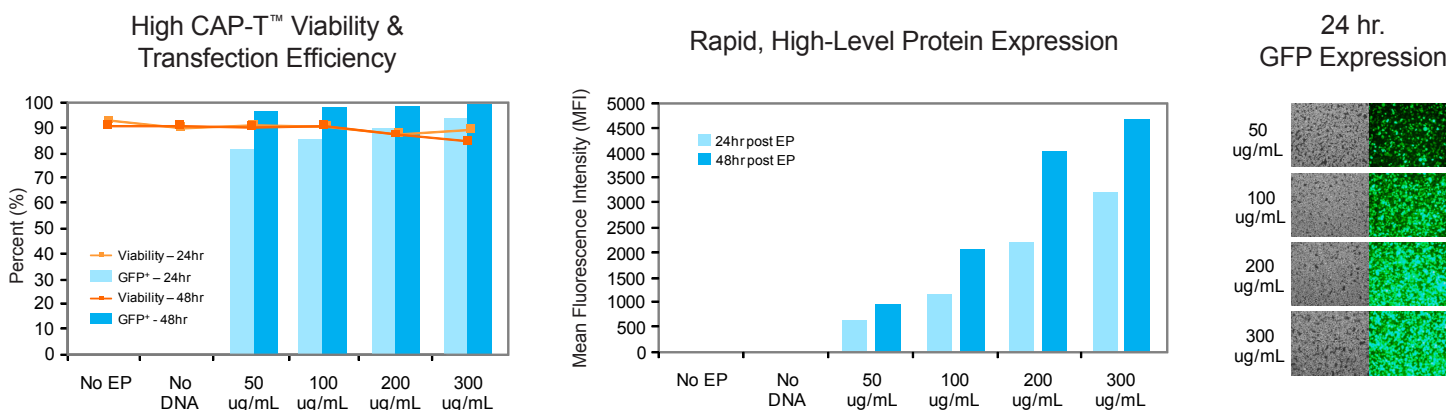


Secreted Alkaline Phosphatase (SEAP) Expression



Superior Production of Secreted Proteins using MaxCyte Electroporation and CEVEC CAP-T Cells. 4×10^7 CAP-T cells were suspended in 400 μl of electroporation buffer and transfected with a secreted alkaline phosphatase (SEAP) expression plasmid at the specified DNA concentrations using the MaxCyte STX (OC-400 processing assembly). Transfected cells were seeded into 40 mL of media following electroporation and cultured for 7 days. Cells numbers and viability levels were assessed on days 1, 2, 3 and 7. Cell supernatants were collected and SEAP activity measured using the SEAPorter[™] Assay Kit.

MaxCyte Transfection using CEVEC CAP-T™ Cells



High Cell Viability and Rapid GFP Expression using the MaxCyte STX and CAP-T cells. CAP-T cells were transfected with a GFP expression plasmid at various DNA concentrations (50, 100, 200 or 300 μ g/mL) using MaxCyte electroporation. Cell number, viability and GFP expression were measured at 24 and 48 hours post transfection using FACS analysis.



The MaxCyte® STX™ Scalable Transfection System uses electroporation (EP) to efficiently transfect cells for use in cell-based assays and the expression of proteins and antibodies. EP protocols optimized for high level protein expression enable the production of proteins from a variety of cell types, including CHO, HEK, and CAP-T cells, at gram-scale quantities. This provides a practical solution to the time, labor and cost challenges faced when relying exclusively on stable cell lines. Major benefits include:

- • • Easy-to-perform transient transfection with high cell viability and transfection efficiency
- • • Fully scalable, able to transfect 5×10^5 cells in seconds, up to 1×10^{10} cells in < 30 minutes
- • • Sustained expression of secreted, membrane-associated or cytoplasmic proteins
- • • Capable of producing gram scale quantities of proteins
- • • Compatible with primary cells, cell lines and other difficult-to-transfect cells



CEVEC's CAP-T protein expression technology is designed for transient protein production and achieves the highest protein yields with authentic human glycosylation patterns. The immortalized cells are originally derived from primary human amniocytes and adapted to serum-free growth conditions in suspension. These versatile cells exhibit exceptional yields for antibodies and complex proteins and are also an excellent tool for vaccine/virus production. Major benefits include:

- • • High yield expression of human proteins, including antibodies, complex proteins and viral vectors
- • • Authentic post-translational modifications
- • • Validated stable growth in a variety of bioreactors
- • • High density growth in suspension under serum-free, chemically defined conditions
- • • Excellent transfection efficiencies and high cell viability

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