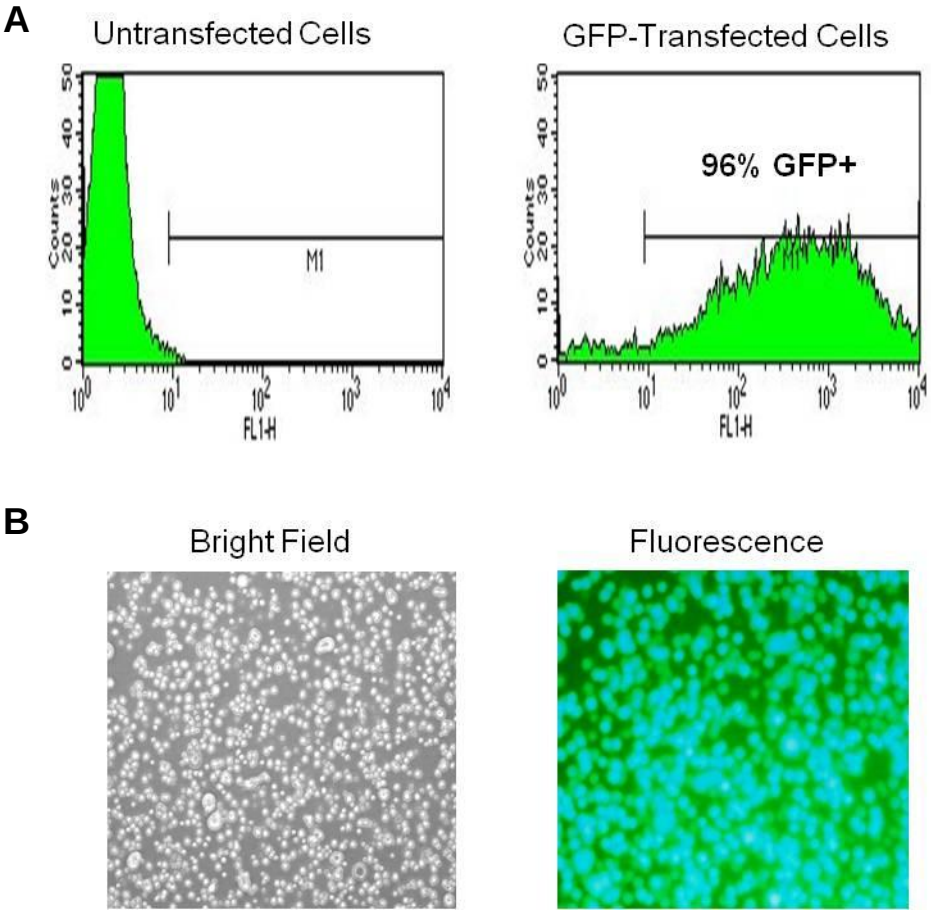
CHO Cell Transfection Efficiency



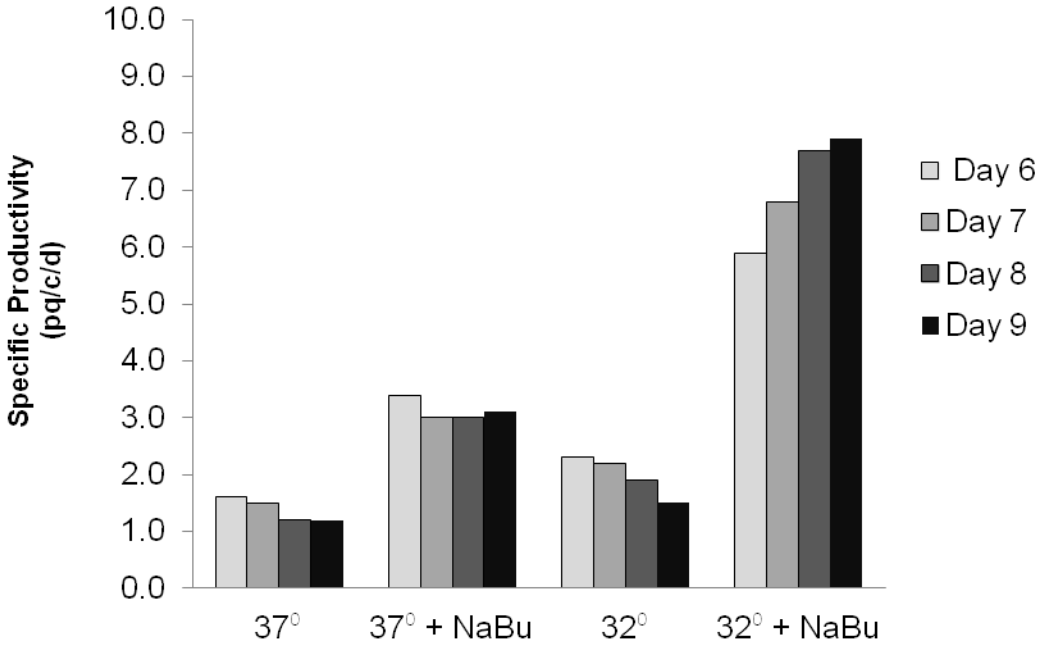
Supplemental Figure S1. High transfection efficiency and cell viability following CHO cell electroporation . CHO-S cells were electroporated with a plasmid (2 µg DNA/1x10^6 cells) encoding GFP. GFP expression and cell viability were measured 24 hours post electroporation via flow cytometry and microscopy. (**A**) FACS analysis of transfected and untransfected CHO cells (**B**) Bright field and fluorescence microscopy of GFP-transfected cells.

Reproducibility and Scalability of Flow Electroporation

Date	Electroporation Scale	Titer (mg/L)
March 20	Large	396
March 20	Small	351
April 24	Large	328
April 24	Small	337
April 24	Small	464
April 24	Small	334
June 12	Large	453
June 12	Small	459
July 3	Small	517
July 3	Small	455
Total	Avg±stdv	409 ± 68
Small-Scale	Avg±stdv	417 ± 74
Large-Scale	Avg±stdv	392 ± 63

Supplemental Table 1. Consistent and reproducible production of antibodies using small- and large-scale CHO cell electroporation. Ten CHO-S cell electroporations were performed on the indicated dates with an antibody expression plasmid (1 µg DNA/1x10^6 cells) via seven small-scale or three large-scale electroporation runs. All cells were cultured using unsupplemented CD CHO medium. Secreted antibody titers were measured via ELISA on day 14 post electroporation.

Sodium Butyrate and Temperature Shift Maximize Productivity



Supplemental Figure S2. Temperature shift and addition of sodium butyrate increase antibody production post electroporation. CHO-S cells were electroporated with an antibody expression plasmid (2 µg DNA/1x10^6 cells). Post electroporation cells were cultured in unsupplemented CD CHO medium. 24 hours post electroporation the temperature was shifted to 32°C for half of the cultures and 1mM sodium butyrate was added to half of the cultures. Antibody titers were measured on days 6, 7, 8, and 9 post electroporation via ELISA and specific productivity calculated.

Rapid Generation of High-Yield Stable Clones

Number of Clones in Primary Screen	479
Number of Clones Chosen for Analysis in Expanded Cultures	23 (Top 5%)

IgG Titer for Top 5%	Number of Clones
< 1.0 g/L	17
1.0 – 1.9 g/L	4
2.0 – 2.9 g/L	1
≥ 3 g/L	1

Supplemental Table 2. CHO-S cell were electroporated with a humanized mAb DNA plasmid and cultured post electroporation in G418 selection medium. Limiting dilution cloning was performed in 25, 96-well plates at 0.3 cells per well. Clones were screened for antibody production approximately one week following limiting dilution cloning. The top 23 clones were further expanded and IgG titer determined via ELISA. The titers of the top 23 performers on day 21 following inoculation of the scaled up cultures are reported.