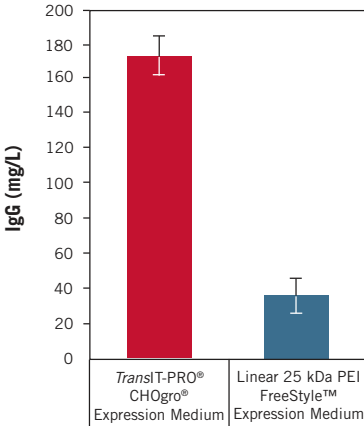


# PEI Users: Tailor Your Workflow with CHOgro® Expression System to Save Time & Money

## CHOgro® Expression System Outperforms Linear PEI



**FIGURE 1.** Human IgG was produced by transient transfection using *TransIT-PRO*® (1:1) or 25 kDa linear PEI (6:1) in either the CHOgro® or FreeStyle™ Expression System. CHO-S cells were grown in designated medium and split to 30ml per 125ml shake flask (Thomson). Clarified supernatants were analyzed using a human IgG ELISA (ZeptoMetrix). Error bars represent the standard error of the mean of triplicate technical replicates.

## Potential Scenario Demonstrating Cost Savings Using PEI

If a researcher needed to produce 150 mg of an IgG protein, 4X more culture volume would be required if 25kDa linear PEI was used with the FreeStyle™ CHO Expression Medium compared to the CHOgro® Expression System. The cost comparison of 4 times the materials and 1.5x the labor costs leads to a 40% reduction in costs if the CHOgro® Expression System is utilized.

Materials needed for 1 L Transfection, 150 mg desired yield

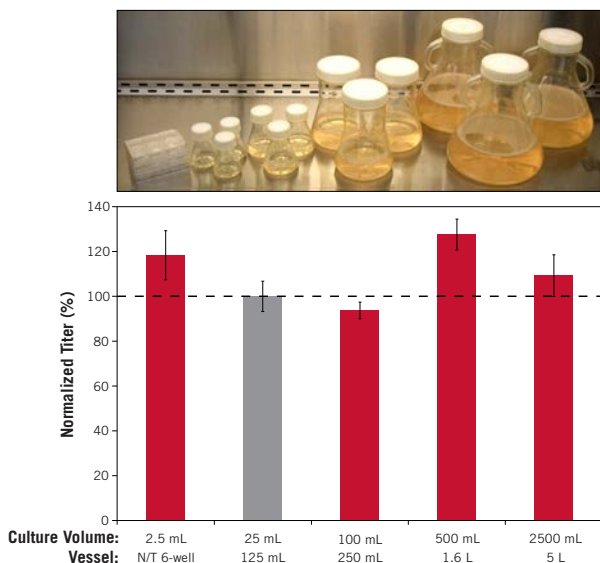
| Medium                         | CHOgro®           | PEI w/ FreeStyle™<br>(Materials 4X, labor 1.5X) |
|--------------------------------|-------------------|---|
| 1 L media                      | 100.00            | 390.00  |
| 100 ml Complex Formation Media | 25.00             | 100.00  |
| 1 mg DNA                       | 100.00            | 400.00  |
| Transfection Reagent           |                   |   |
| <i>TransIT-PRO</i> ®           | 357.00            | --  |
| 25 kDa linear PEI              | --                | 2.00  |
| Disposable 1 L Culture Flask   | 102.00            | 408.00  |
| Time in hours (\$150 per hour) | 750.00            | 1125.00   |
| <b>TOTAL</b>                   | <b>\$1,434.00</b> | <b>\$2,425.00*</b>                              |

NOTE: PEI experiment would take up more incubator space due to more flasks.

\*In this scenario, there is approximately a 40% higher cost associated with PEI transfection reagent.



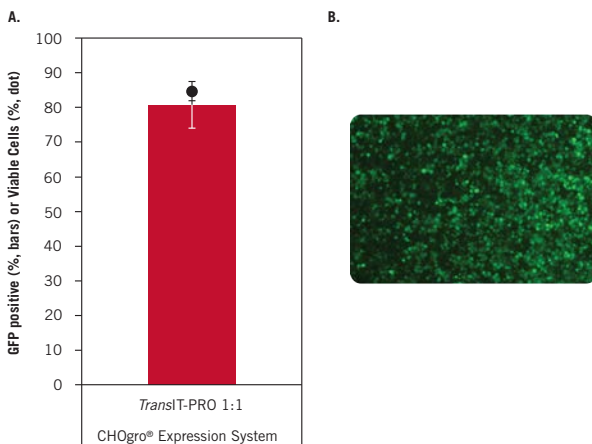
## CHOgro® Expression System Outperforms Linear PEI



**FIGURE 2.** Human IgG1 was produced by transient transfection with the *TransIT-PRO*® Transfection Reagent and 1 µg plasmid DNA per milliliter of culture at a 1:1 reagent:DNA ratio. Cells were transfected at a density of  $2 \times 10^6$  cells/ml in CHOgro® Expression Medium on an orbital shaker at the following volumes/culture vessels: 2.5 ml/non-tissue culture treated 6-well dish, 25 ml/125 ml Thomson flask, 100 ml/250 ml Thomson flask, 1000 ml/1.6 L Thomson flask, 2.5 L/5 L Thomson flask. At twenty-four hours post-transfection all cultures were moved to 32° C for the remainder of the experiment. Antibody levels were also analyzed from day 7 clarified supernatants using a human IgG ELISA (Zeptometrix). All values are normalized to the 25ml volume sample and error bars represent the standard error of the mean of triplicate technical replicates.



## *TransIT-PRO*® Transfection Reagent High Efficiency Transfection



**FIGURE 3.** GFP was expressed in CHO-S cells by transient transfection using the *TransIT-PRO*® Transfection Reagent (1:1). (A) GFP efficiency and cell viability (propidium iodide) were measured 48 hours post-transfection using a Guava easyCyte™ 5HT flow cytometer (EMD Millipore). (B) Images were captured using a Zeiss Axiovert inverted fluorescence microscope.