

Effect of pH and temperature on recombinant antibody production by culture of rCHO cells

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Abstract

The increasing needs for therapeutic proteins derived from mammalian cells such as recombinant antibody have led to much development in the area of animal cell technology. In this study, optimal pH values and temperature in the culture of rCHO cells were investigated for high productivity of recombinant antibody.

To investigate the effects of pH and temperatures on the cell growth and recombinant antibody production, suspension culture of rCHO cells were performed at various pHs (6.6 ~ 7.4 at 37.0°C) and temperatures (30°C, 33°C and 37°C). The production rates of recombinant antibody increased with increasing pH values. At the temperatures lower than 37°C cell growth was suppressed, but cell viability maintained at for longer culture periods. After the cells cultured at 37°C were shifted to 30°C and 33°C, antibody production showed a dramatic increase over the control.

Reference

1. Sung Kwan Yoon, Sang Lim Choi, Ji Yong Song, Gyun Min Lee, Effect of Culture pH on Erythropoietin Production by Chinese Hamster Ovary Cells Grown in Suspension at 32.5 and 37.0°C(2005), BIOTECHNOLOGY AND BIOENGINEERING, VOL. 89, NO. 3, pp 345- 356