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# Cell Express 100™ - A robust, simple and cost effective alternative to highthroughput automated platforms for cell line development

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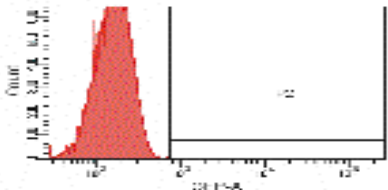
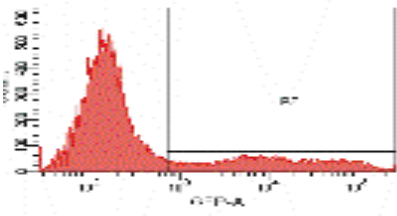
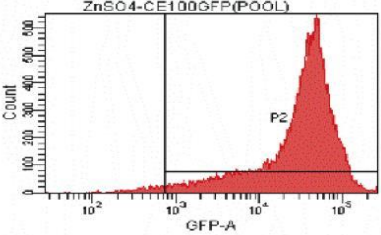
## CELL EXPRESS 100™ – A ROBUST, SIMPLE AND COST EFFECTIVE ALTERNATIVE TO HIGH-THROUGHPUT AUTOMATED PLATFORMS FOR CELL LINE DEVELOPMENT

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**Key Words:** Monoclonal Antibody, Cell Line Development, Mammalian Expression System, High Throughput Methods, Chinese Hamster Ovary (CHO) Cells.

The unrivalled growth in monoclonal antibody (mAb) therapeutics is demanding for a rapid, simple and cost effective expression system. Conventional expression system makes use of Gene Amplification Strategies, Chromatin Modifying Elements and High-Throughput Automated Platforms for cell line development. All these process are complex and costly. CELL EXPRESS 100™ with its simple selection procedure and being able to generate 100% stable high expressing pool simplifies the isolation of high producing cell line without the need for Amplification, Chromatin Modifying Elements and High Throughput Automated Platforms. CELL EXPRESS 100™ expression system consists of an expression vector (pUB-CE-100) and a host cell line [Rodent (CHO, NS0, BHK), Monkey (COS), Human (HEK293, PerC6)]. pUB-CE-100 was designed to have Gene Of Interest (GOI) placed in the UTR of selectable marker gene (neo<sup>r</sup>) there by allowing efficient selection of 100% GOI expressing cells (Figure 1). The positioning of GOI and the stringent selection conditions facilitates generation of stable high expressing pool in single round of selection. The high expressing pool further simplifies the isolation of high expressing clone without the use of High-Throughput Methods. CELL EXPRESS 100™ can generate stable high expressing pool in less than 21 days with a productivity of ~1g/L and high expressing stable clone in less than 2 months with a productivity of 2-3g/L. This makes CELL EXPRESS 100 superior to conventional expression systems and high-throughput methods.

**Figure 1: Comparison of Conventional Expression Systems Vs CELL EXPRESS 100™**

	GFP Expressing Stable Pool	Method Used To Isolate High Producing Clone	Time For Cell Line Development
Untransfected CHO Cells			
CHO Cells Transfected With Conventional Expression Systems		High Throughput Methods - FACS - ClonePix	3-6 months
CHO Cells Transfected With CELL EXPRESS 100™		Limiting Dilution	< 2 months