

### Increase the Yield of Your Antibody Derivative Proteins

*Pfēnex* Expression Technology™ from Dowpharma<sup>SM</sup> contract manufacturing services is a *Pseudomonas*-based system that can consistently outperform *E. coli* and mammalian cell culture when it comes to the rapidly growing class of antibody derivative proteins. Many of these new proteins are non-native structures without evolutionarily programmed folding information, so titers are typically very low in traditional expression systems. *Pfēnex* Expression Technology is a proven platform for production of these engineered protein molecules that will speed your time to market and lower your overall manufacturing costs.

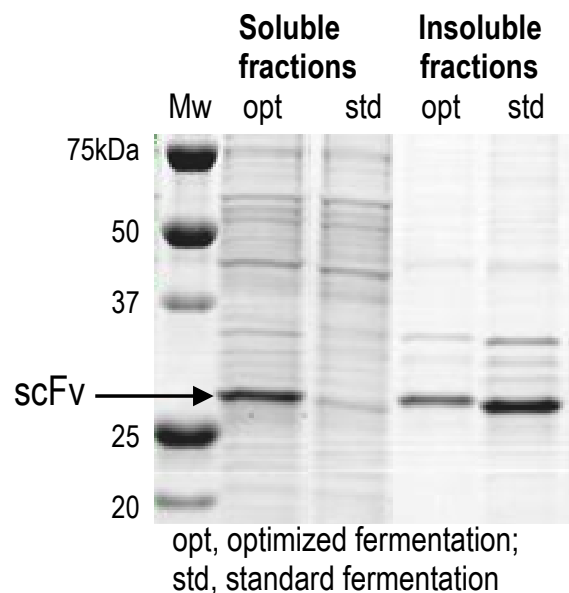
### *Pfēnex* Expression Technology™ for Antibody Derivatives

<u>Features</u>	<u>Benefits</u>
Higher expression levels of fully functional protein	Reduced COGS
Correct folding through periplasmic targeting technology	Improved quality
Rapid strain development with ready to clone, off-the-shelf strains	Faster development
Simplified and scalable downstream processing methods	Maximize asset utilization

**Case Study:** Expression of a soluble single chain antibody fragment (scFv) using *Pfēnex* Expression Technology™

Periplasmic expression of the scFv was predominantly in the insoluble fraction in a standard fermentation process. With minimal optimization of the fermentation process, significant amount of scFv was expressed in the soluble fraction, which would allow for **simple periplasmic recovery of the functional product without the need for refolding.**

	g/L scFv	
	sol	insol
<b>optimized fermentation</b>	3.5	2.0
<b>standard fermentation</b>	0.8	4.6



[www.dowpharma.com](http://www.dowpharma.com)  
[dowpharma@dow.com](mailto:dowpharma@dow.com)

1-866-332-5805 in the U.S. and Canada; +44-123-728048 in Europe