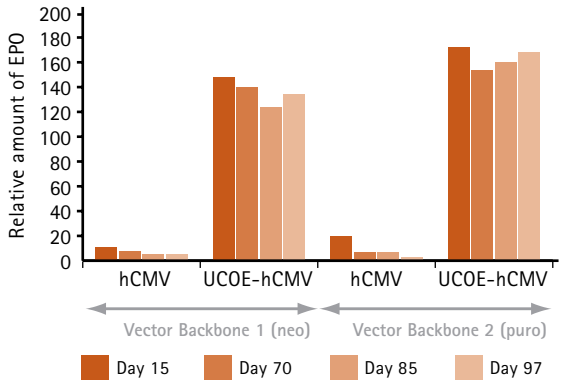
Introducing UCOE® mammalian gene expression technology.

Need an easy way to improve protein expression?

Before going through time-consuming optimization protocols, try Merck Millipore's NEW ubiquitous chromatin opening element (UCOE®) technology.

With UCOE® technology, you can:

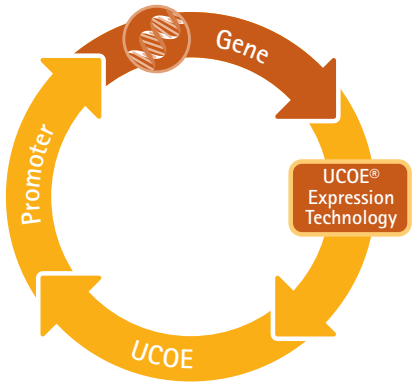
- Achieve grams of protein in less than 30 days
- Boost expression levels up to 20-fold higher than possible with conventional vectors
- Enhance industry-standard platforms, such as CHO cells and CMV promoters



UCOE® expression technology gives a 9- to 56-fold boost in the production level of a secreted protein (Erythropoietin). A single UCOE® element placed upstream of the 5' end of the promoter and transgene is sufficient to boost expression twenty-fold or more. CHO-K1 cells transfected with erythropoietin expression constructs with or without UCOE® expression technology. Drug-selected pools were assessed for erythropoietin production.

What is UCOE® technology?

UCOE® elements are methylation-free CpG-rich DNA sequences derived from housekeeping genes. The UCOE® element acts by impacting chromatin organization, allowing for increased and stable transgene expression in mammalian cells.



For more information, visit:
www.merckmillipore.com/UCOE

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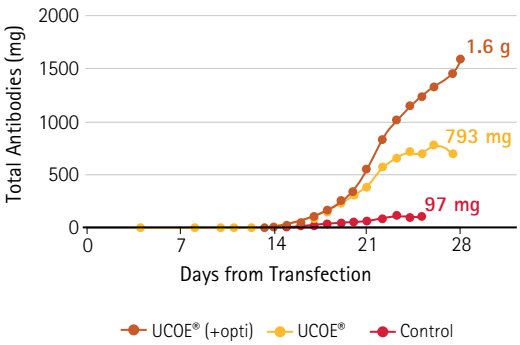
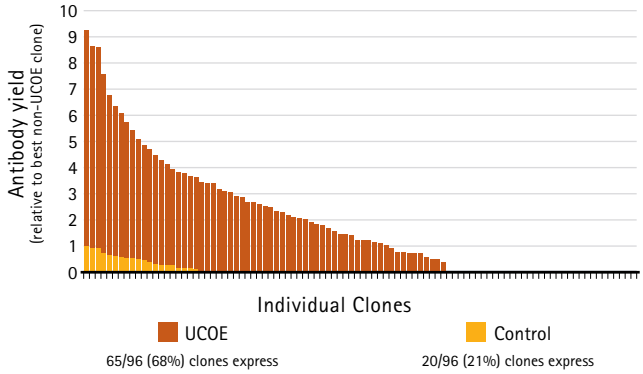
Higher yields in less time:



Rapid production of a monoclonal antibody. 3 x 10^7 CHO-S cells were transfected with 90 µg of an antibody expression plasmid either with or without a UCOE® element. Drug selection was applied and, once sufficient cell number was generated, cells were seeded at a cell density that would allow growth to 10 L. On day 16, a small addition was made to a portion of the cultures (+opti). A fraction of the cells were grown and the data shown are an extrapolation of the yield if 10 L of culture had been generated.

Easier and faster to find high-expressing clones:



Because the majority of cells are stable high-expressors, it is much easier and faster to find high-yielding clones, as opposed to the "needle-in-a-haystack" approach using conventional vectors. Vectors encoding heavy and light chains (separate plasmids) were co-transfected into CHO-S cells followed by drug selection and screening of 96 randomly selected clones.

Description	Catalogue No.
UCOE® Expression Vector, Mouse 3.2 kb, Puro	5.04865.0001
UCOE® Expression Vector, Mouse 3.2 kb, Hygro	5.04866.0001
UCOE® Expression Vector, Human, 4 kb, Puro	5.04867.0001

For more information, visit:
www.merckmillipore.com/UCOE

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