

ClearColi™ Technology Eliminates Endotoxin at the Source

Exclusively from Lucigen

- *E. coli* plasmid and protein production strains lacking endotoxic LPS
- Ideal for mammalian cell transfection, immunogenicity and toxicity assays
- Reduce false positives in cytokine assays, improve large scale transfection results
- Eliminate expensive cleanup steps



A better way to eliminate endotoxin contamination

Proteins and plasmids prepared from ClearColi cells are virtually free of endotoxic activity. Instead of removing lipopolysaccharide (LPS) contamination from your plasmid DNA or protein preparations, eliminate LPS at the source. ClearColi™ cells are the first commercially available competent cells with a modified LPS that virtually eliminates endotoxic response. ClearColi cells lack outer membrane agonists for hTLR4/MD-2 activation, virtually eliminating this response compared with *E. coli* wild-type cells.

ClearColi K-12

- Cloning and plasmid production
- Mammalian transfection without endotoxin cleanup
- Transient protein expression

ClearColi BL21(DE3)

- Human cell immunogenicity and toxicity assays
- Therapeutic protein production
- Membrane and lipid-binding protein production

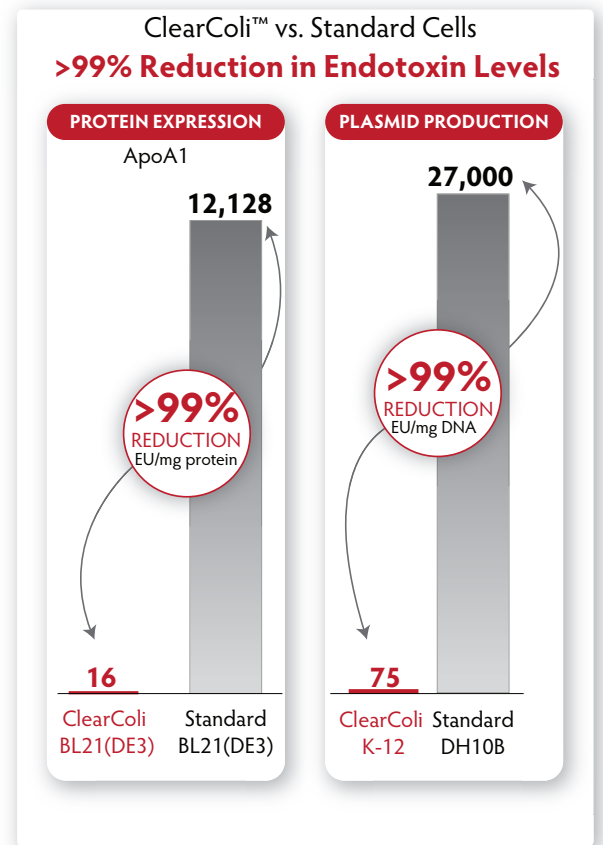
Coming Soon!

Extracellular Protein Secretion and Phage Display Strains

GENOTYPES:

K-12 Strain: F- λ - Δ endA Δ recA *frs181 msbA52* Δ gutQ Δ kdsD Δ lpxL Δ lpxM Δ pagP Δ lpxP Δ eptA

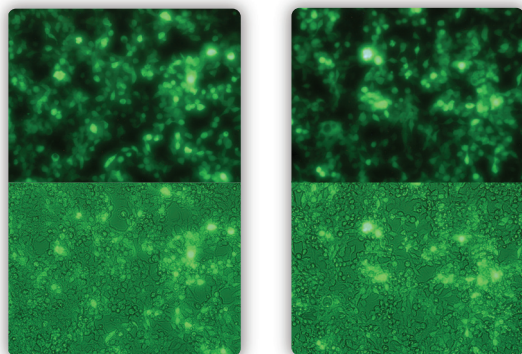
BL21(DE3) STRAIN: F- ompT hsdS_B (r_B- m_B-) gal dcm lon λ (DE3 [lacI lacUV5-T7 gene 1 ind1 sam7 nin5]) msbA148 Δ gutQ Δ kdsD Δ lpxL Δ lpxM Δ pagP Δ lpxP Δ eptA



See lucigen.com/clearcoli for more information.

Plasmid Production

Fluorescent Protein Expression in Mammalian Cells:
ClearColi™ K-12 vs. DH10B derived plasmids



ClearColi K-12 plasmids
Standard Maxi prep

DH10B plasmids
Qiagen EndoFree prep

Comparison of expression of a green fluorescent protein in HEK293T cells from ClearColi-derived plasmids and standard maxi prep (left) vs. DH10B-derived plasmids and endofree maxi prep (right). The upper panels show fluorescence; the lower panels show a combined fluorescence and bright field image.

Products	Size	Cat. No.
ClearColi™ K-12 Electrocompetent Cells	12 rxns (DUO)	60850-1
	24 rxns (DUO)	60850-2

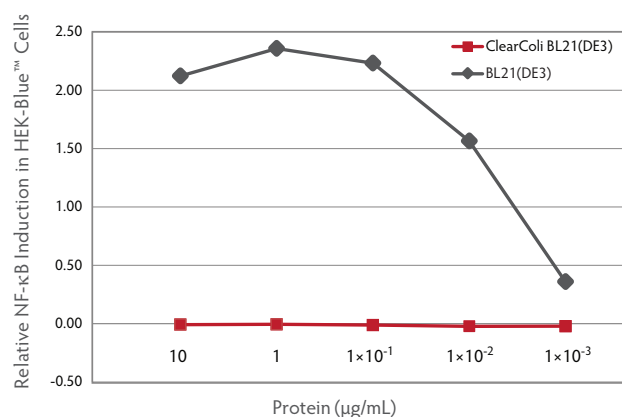
ORDER INFORMATION

Each ClearColi K-12 Electrocompetent Cell Kit contains: ClearColi K-12 Electrocompetent Cells in DUO packaging (2 transformations per tube), Recovery Medium, and pUC19 Positive Control Plasmid. Complete protocols are available online at www.lucigen.com/manuals.

Recovery Medium is also available separately.

Protein Production

Endotoxicity of Protein from
ClearColi™ BL21(DE3) Vs. Standard BL21(DE3)



Comparison of endotoxic response from protein derived from ClearColi BL21(DE3) and traditional BL21(DE3) competent cells. ApoA1 protein was expressed from a T7-promoter based plasmid in both cell types, followed by a simple Ni-column purification step and without any subsequent endotoxin removal steps. The purified proteins were then tested for Toll-Like Receptor (TLR) stimulation by assessing NF-κB activation in HEK293 cells expressing human TLR4. Protein derived from ClearColi BL21(DE3) cells demonstrated no activation at concentrations 5 orders of magnitude greater than the protein from traditional BL21(DE3) cells.

Products	Size	Cat. No.
ClearColi™ BL21(DE3) Electrocompetent Cells	12 rxns (DUO)	60810-1
	24 rxns (DUO)	60810-2

ORDER INFORMATION

Each ClearColi BL21(DE3) Electrocompetent Cell Kit contains: the indicated ClearColi BL21(DE3) Electrocompetent Cells in DUO packaging (2 transformations per tube), Expression Recovery Medium (lactose minus), pUC19 Positive Control Plasmid. Complete protocols are available online at www.lucigen.com/manuals.

Expression Recovery Medium (lactose minus) is also available separately.

COMING SOON!

ClearColi Strains for Extracellular Protein Secretion and Phage Display.

ClearColi Licensing Information:

ClearColi™ Competent cells are subject to US Patent 8,303,964 and other US and foreign pending patents. Lucigen Corporation ("Lucigen") has a license from Research Corporation Technologies (RCT) to sell ClearColi competent cells to third-parties for non-commercial research purposes only. A separate license is required for any commercial use. For more specifics on licensing requirements, visit ClearColi.com.

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