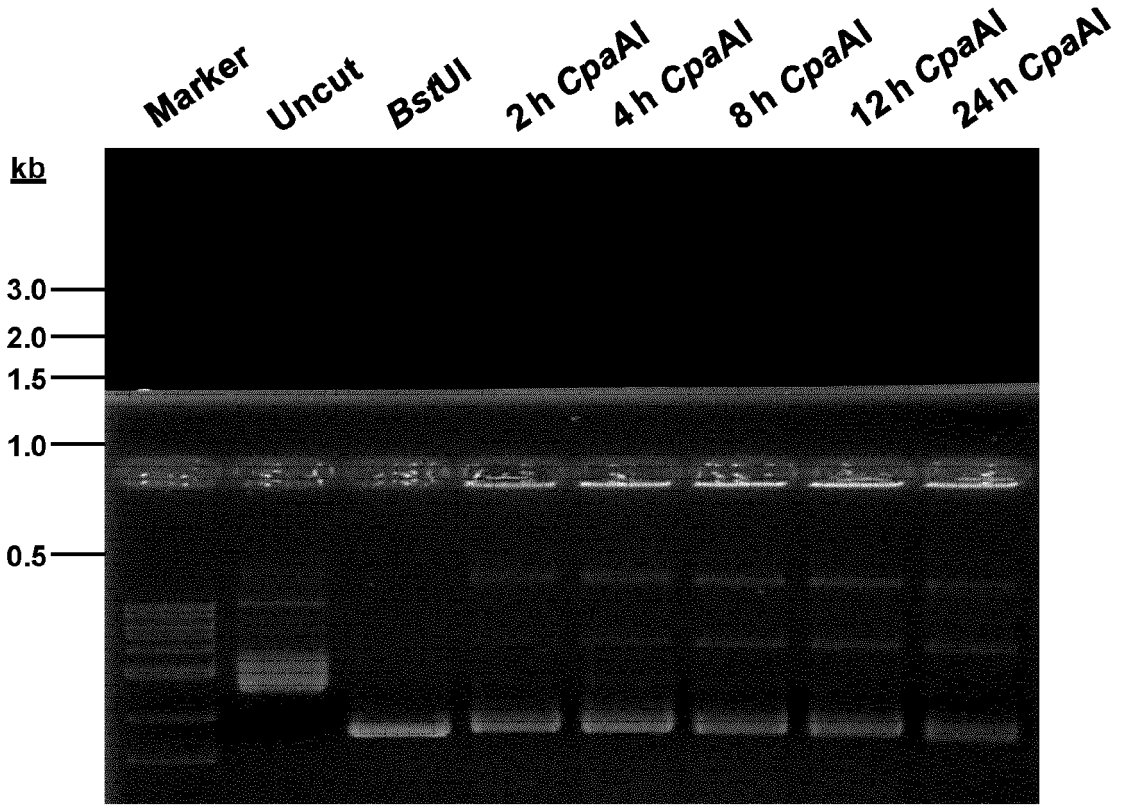

Marker
Uncut
BstUI
2 h CpaAI
4 h CpaAI
8 h CpaAI
12 h CpaAI
24 h CpaAI
kb
3.0
2.0
1.5
1.0
0.5

FIG. 1A

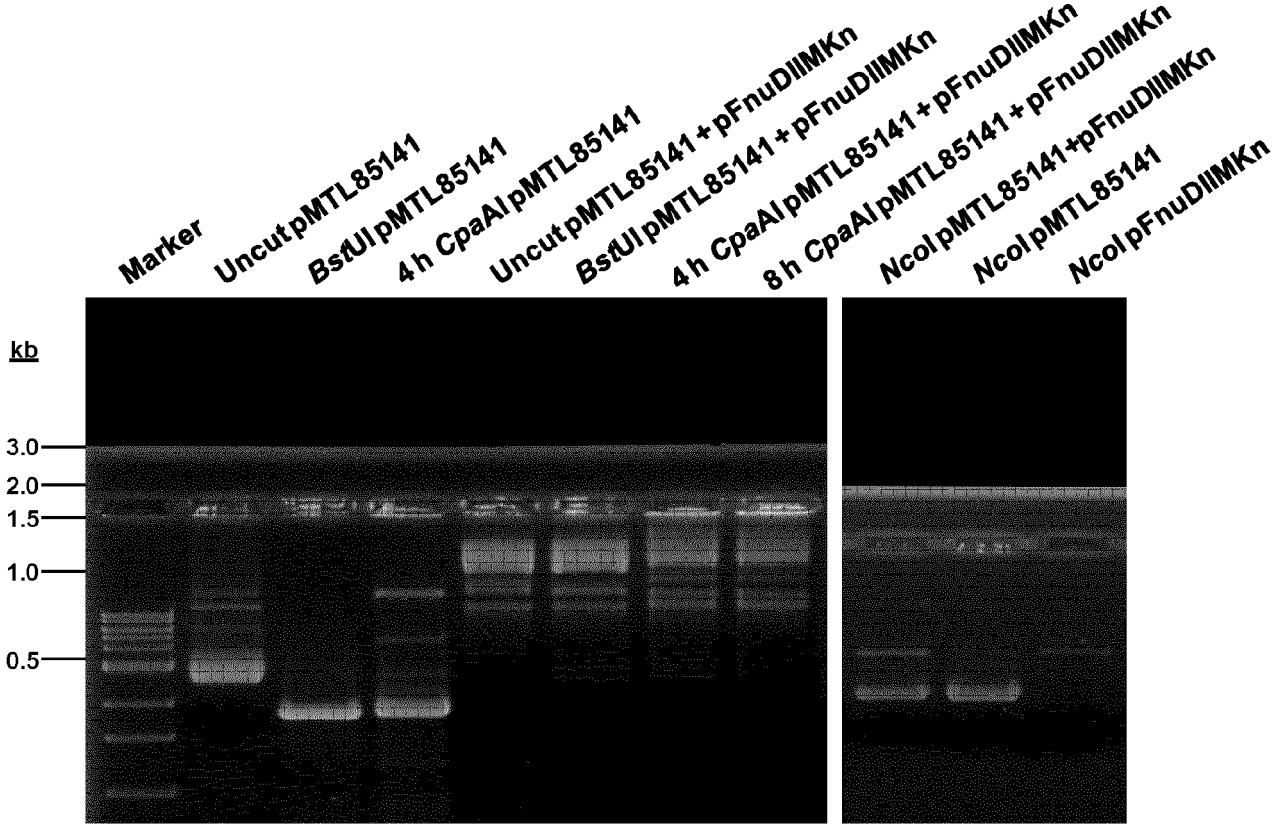

Marker
Uncut pMTL85141
BstUI pMTL85141
4 h CpaAI pMTL85141
Uncut pMTL85141 + pFnuDIIMKn
BstUI pMTL85141 + pFnuDIIMKn
4 h CpaAI pMTL85141 + pFnuDIIMKn
8 h CpaAI pMTL85141 + pFnuDIIMKn
NcoI pMTL85141+pFnuDIIMKn
NcoI pMTL85141
NcoI pFnuDIIMKn
kb
3.0
2.0
1.5
1.0
0.5

FIG. 1B

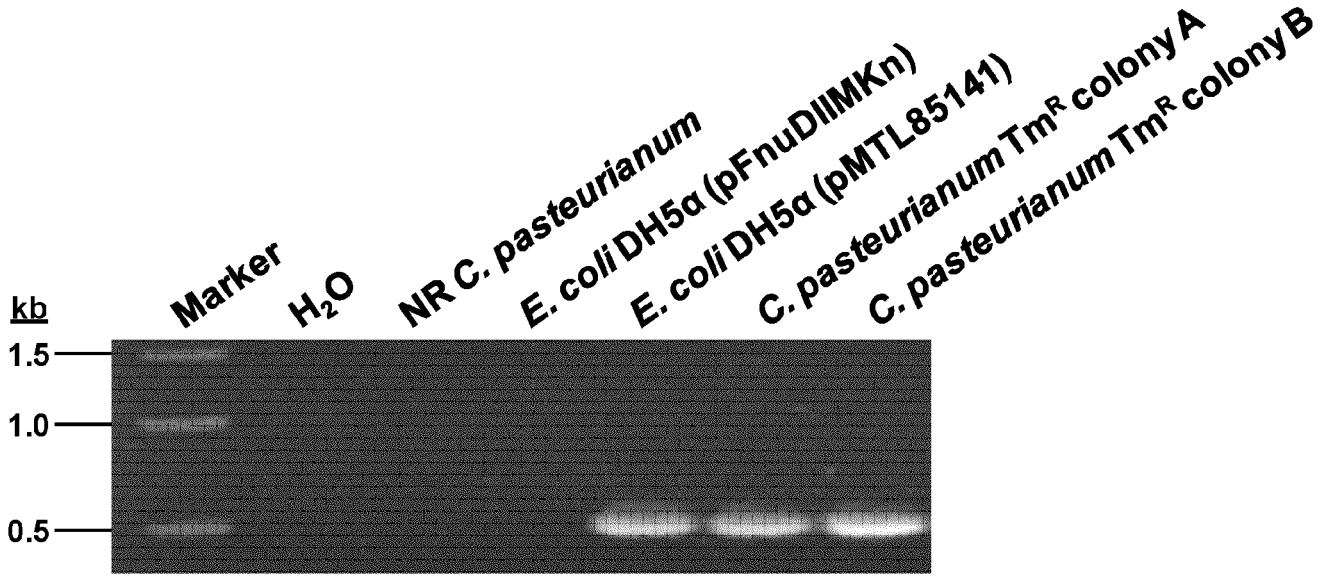

kb
1.5
1.0
0.5
Marker
H2O
NR C. pasteurianum
E. coli DH5α (pFnuDIIMKn)
E. coli DH5α (pMTL85141)
C. pasteurianum TmR colony A
C. pasteurianum TmR colony B

FIG. 2A

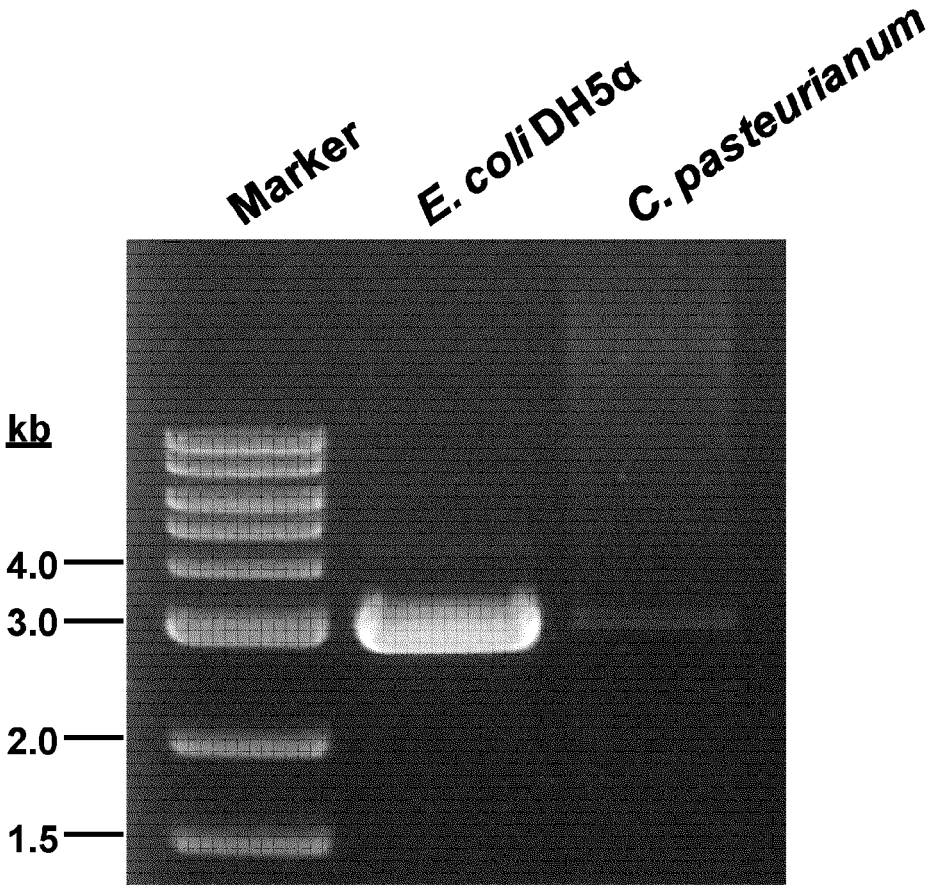

kb
4.0
3.0
2.0
1.5
Marker
E. coli DH5α
C. pasteurianum

FIG. 2B

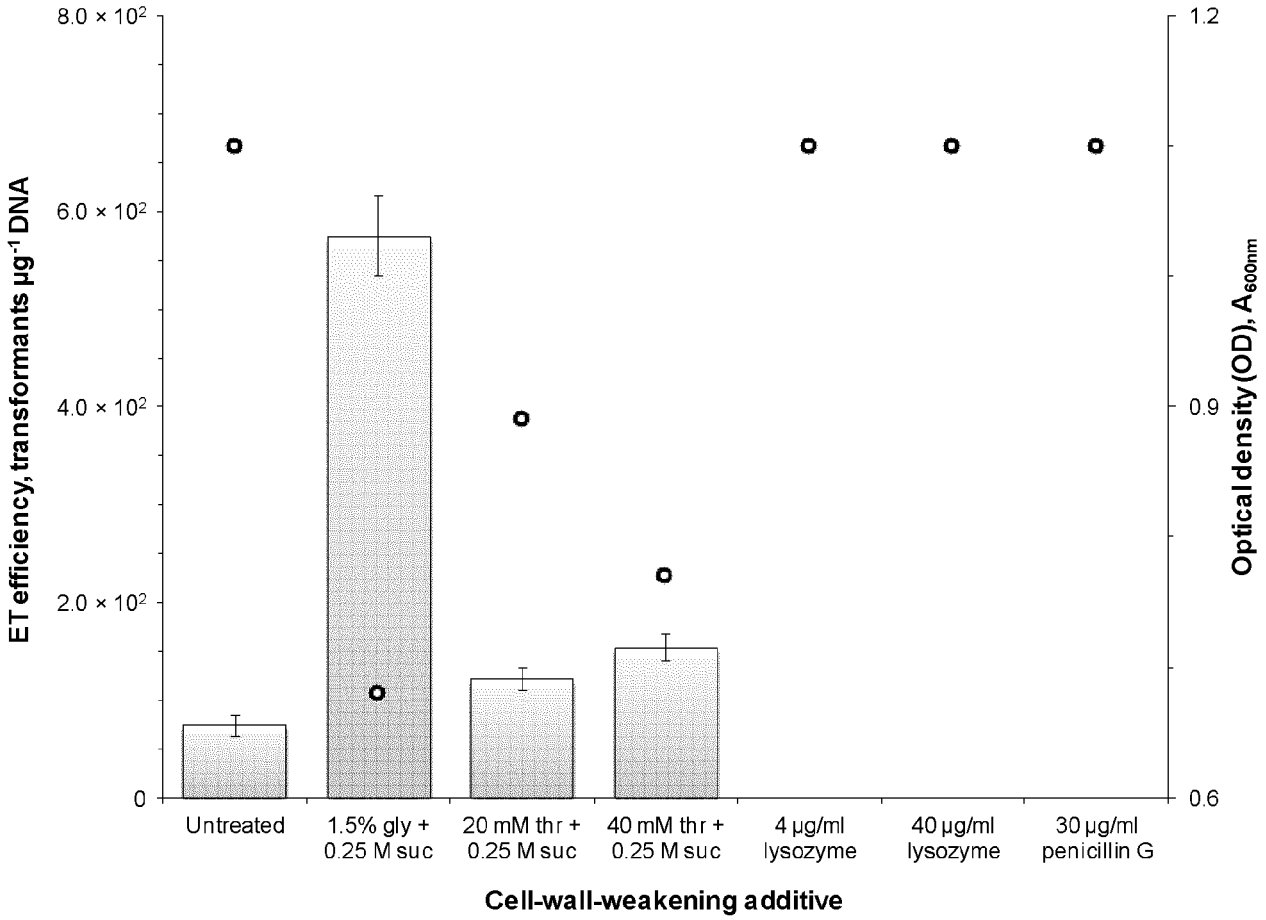

8.0 × 10²
6.0 × 10²
4.0 × 10²
2.0 × 10²
0
ET efficiency, transformants µg⁻¹ DNA
1.2
0.9
0.6
Optical density (OD), A600nm
Untreated
1.5% gly + 0.25 M suc
20 mM thr + 0.25 M suc
40 mM thr + 0.25 M suc
4 µg/ml lysozyme
40 µg/ml lysozyme
30 µg/ml penicillin G
Cell-wall-weakening additive

FIG. 3A

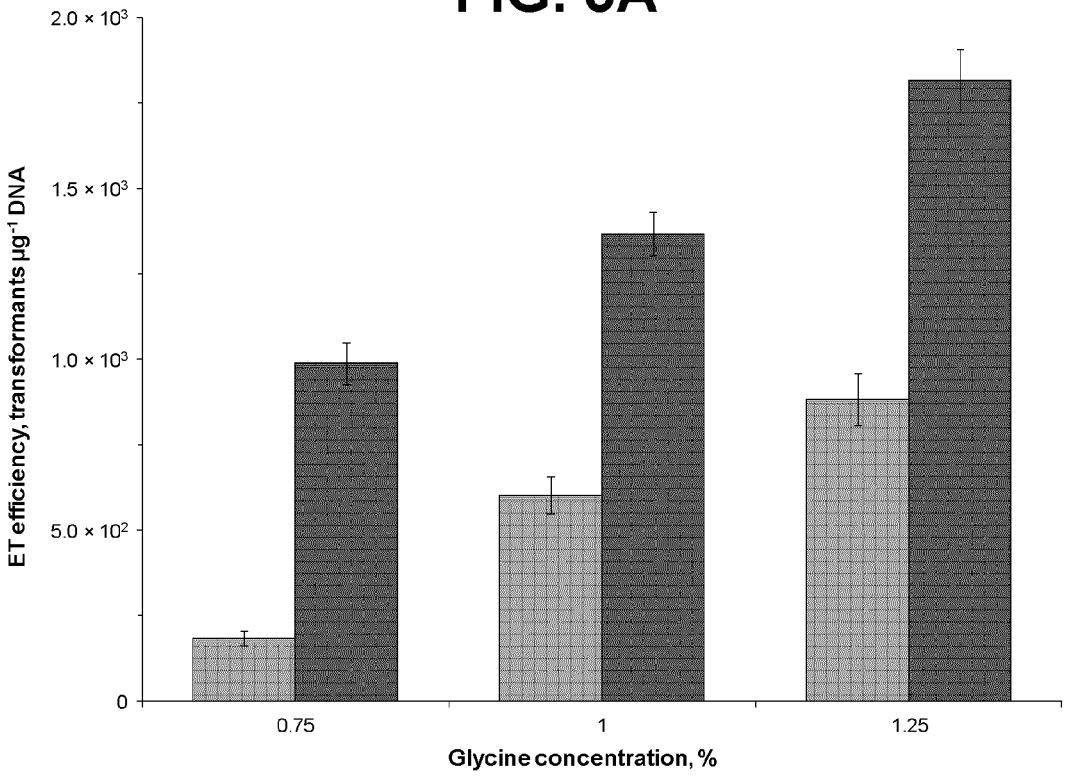

2.0 × 10³
1.5 × 10³
1.0 × 10³
5.0 × 10²
0
ET efficiency, transformants µg⁻¹ DNA
0.75
1
1.25
Glycine concentration, %

FIG. 3B

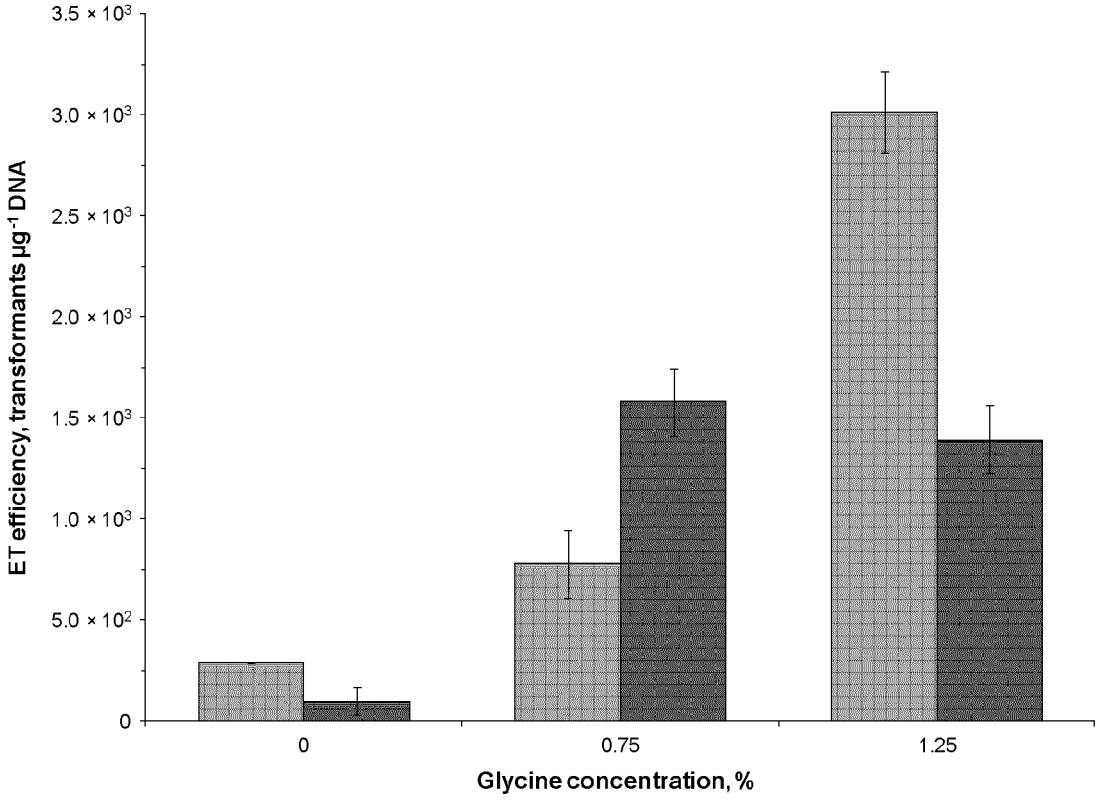

3.5 × 10³
3.0 × 10³
2.5 × 10³
2.0 × 10³
1.5 × 10³
1.0 × 10³
5.0 × 10²
0
ET efficiency, transformants µg⁻¹ DNA
0
0.75
1.25
Glycine concentration, %

FIG. 3C

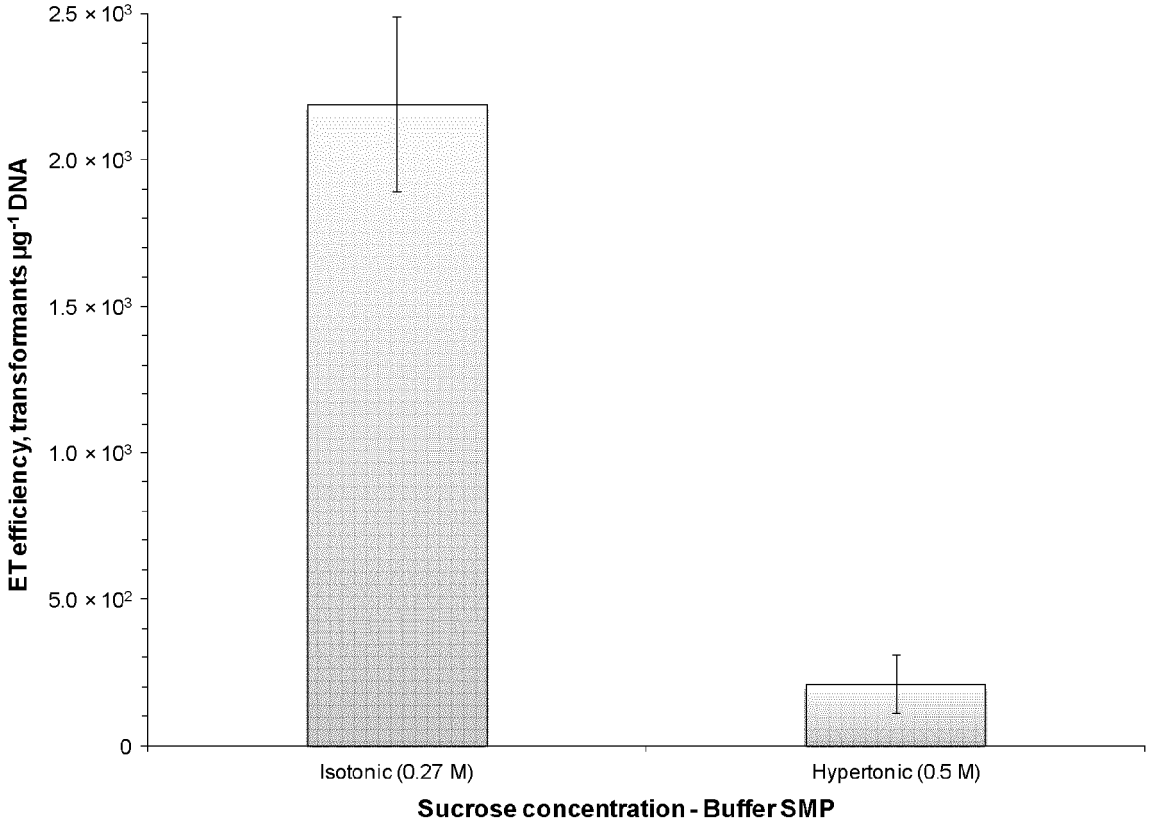

2.5 × 10³
2.0 × 10³
1.5 × 10³
1.0 × 10³
5.0 × 10²
0
ET efficiency, transformants µg⁻¹ DNA
Isotonic (0.27 M)
Hypertonic (0.5 M)
Sucrose concentration - Buffer SMP

FIG. 3D

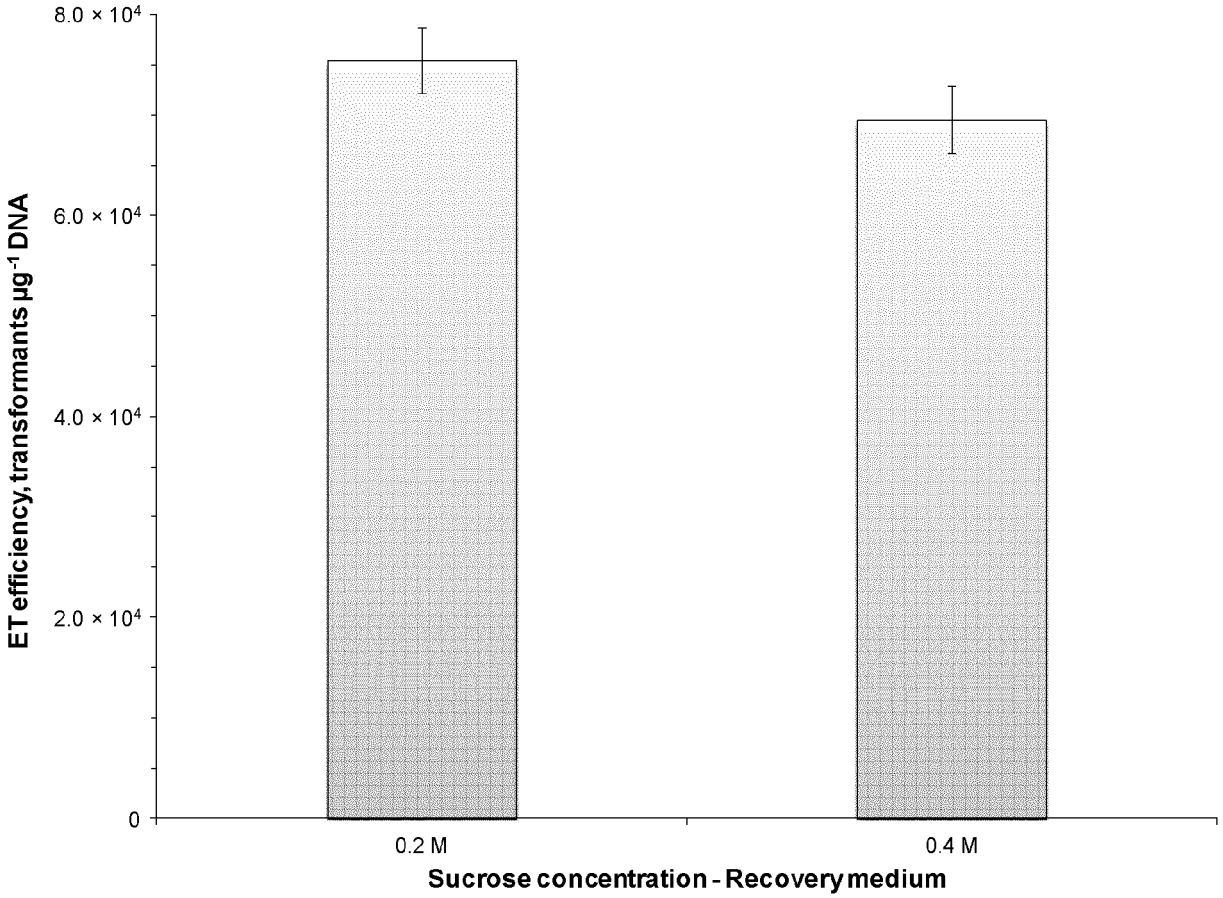

8.0 × 10⁴
6.0 × 10⁴
4.0 × 10⁴
2.0 × 10⁴
0
ET efficiency, transformants µg⁻¹ DNA
0.2 M
0.4 M
Sucrose concentration - Recovery medium

FIG. 3E

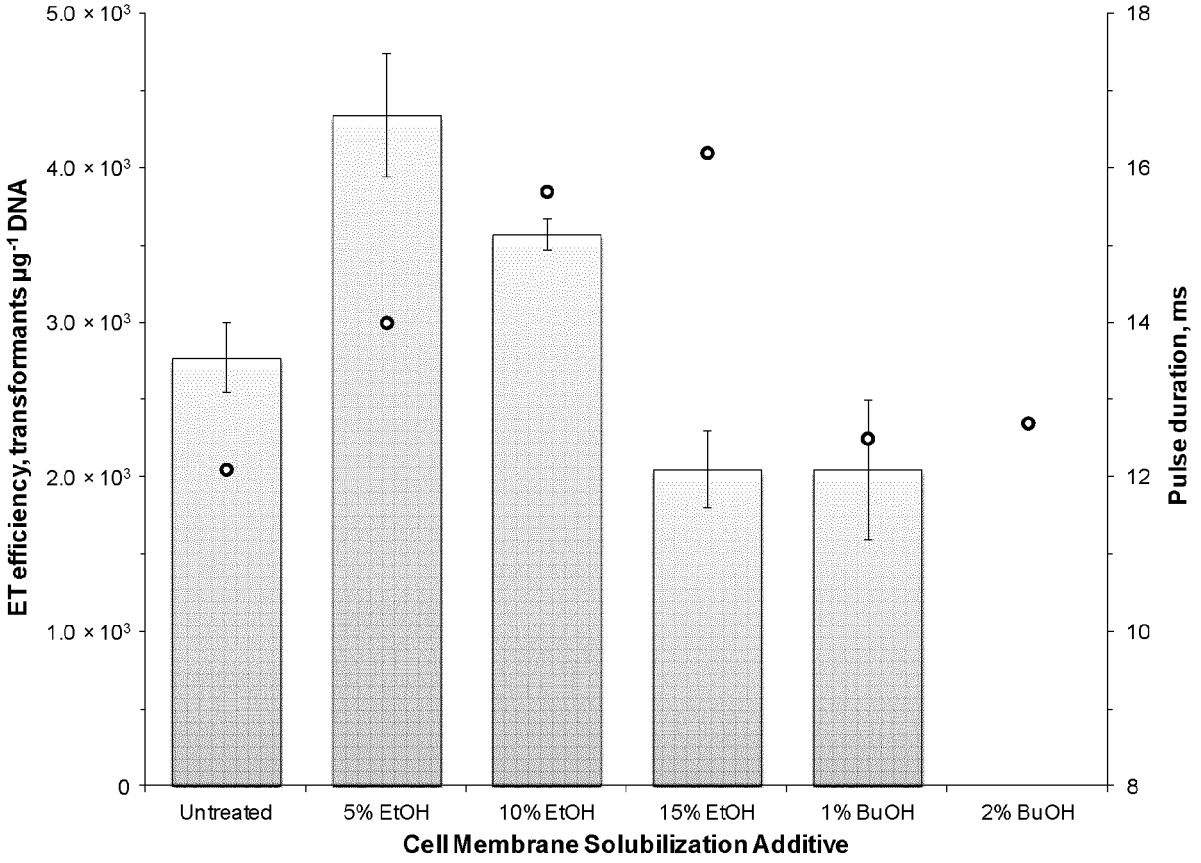

5.0 × 10³
4.0 × 10³
3.0 × 10³
2.0 × 10³
1.0 × 10³
0
ET efficiency, transformants µg⁻¹ DNA
18
16
14
12
10
8
Pulse duration, ms
Untreated
5% EtOH
10% EtOH
15% EtOH
1% BuOH
2% BuOH
Cell Membrane Solubilization Additive

FIG. 4

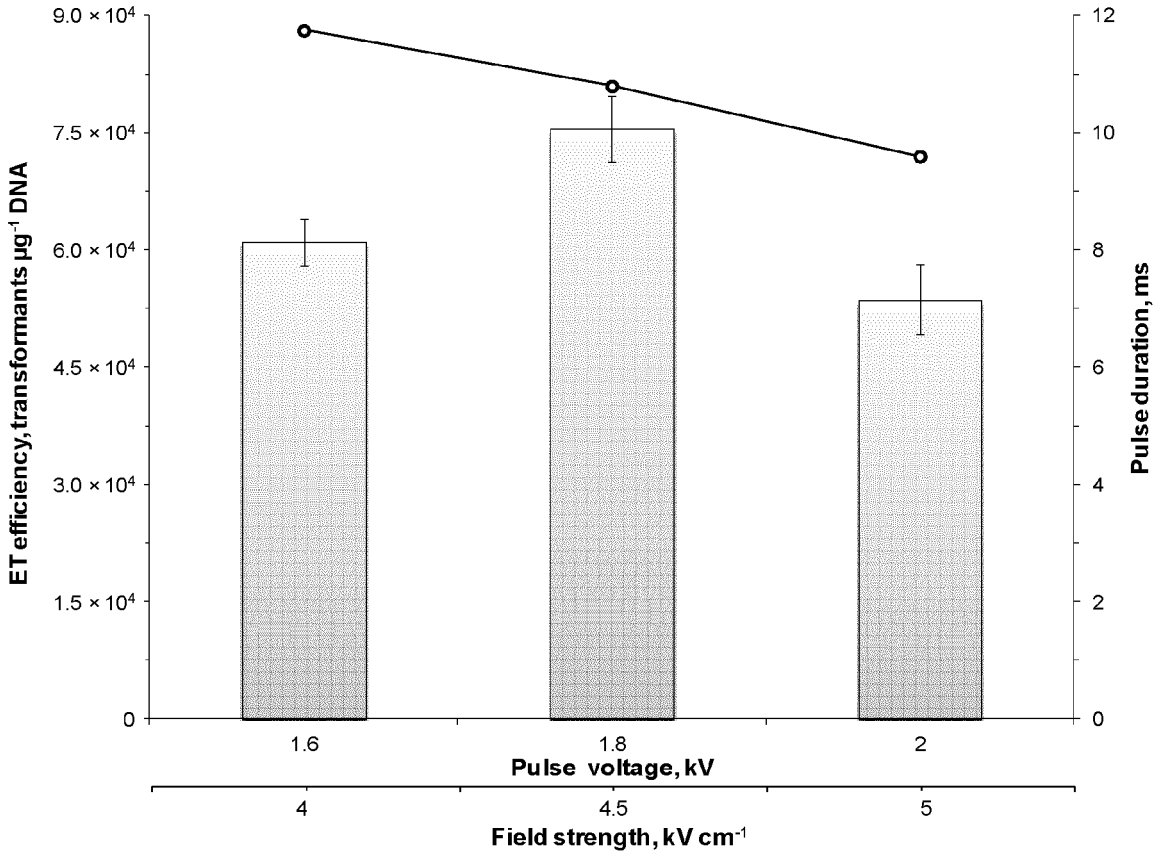

9.0 × 10⁴
7.5 × 10⁴
6.0 × 10⁴
4.5 × 10⁴
3.0 × 10⁴
1.5 × 10⁴
0
ET efficiency, transformants µg⁻¹ DNA
12
10
8
6
4
2
0
Pulse duration, ms
1.6
1.8
2
Pulse voltage, kV
4
4.5
5
Field strength, kV cm⁻¹

FIG. 5A

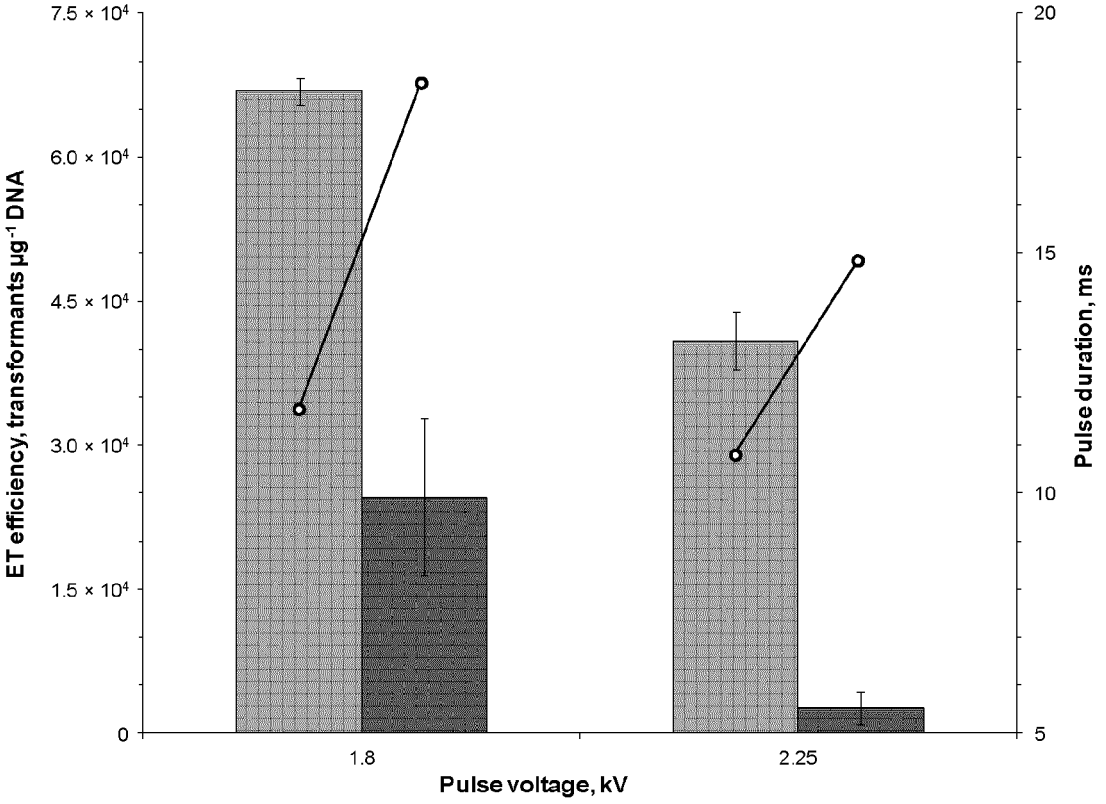

7.5 × 10⁴
6.0 × 10⁴
4.5 × 10⁴
3.0 × 10⁴
1.5 × 10⁴
0
ET efficiency, transformants µg⁻¹ DNA
20
15
10
5
Pulse duration, ms
1.8
2.25
Pulse voltage, kV

FIG. 5B

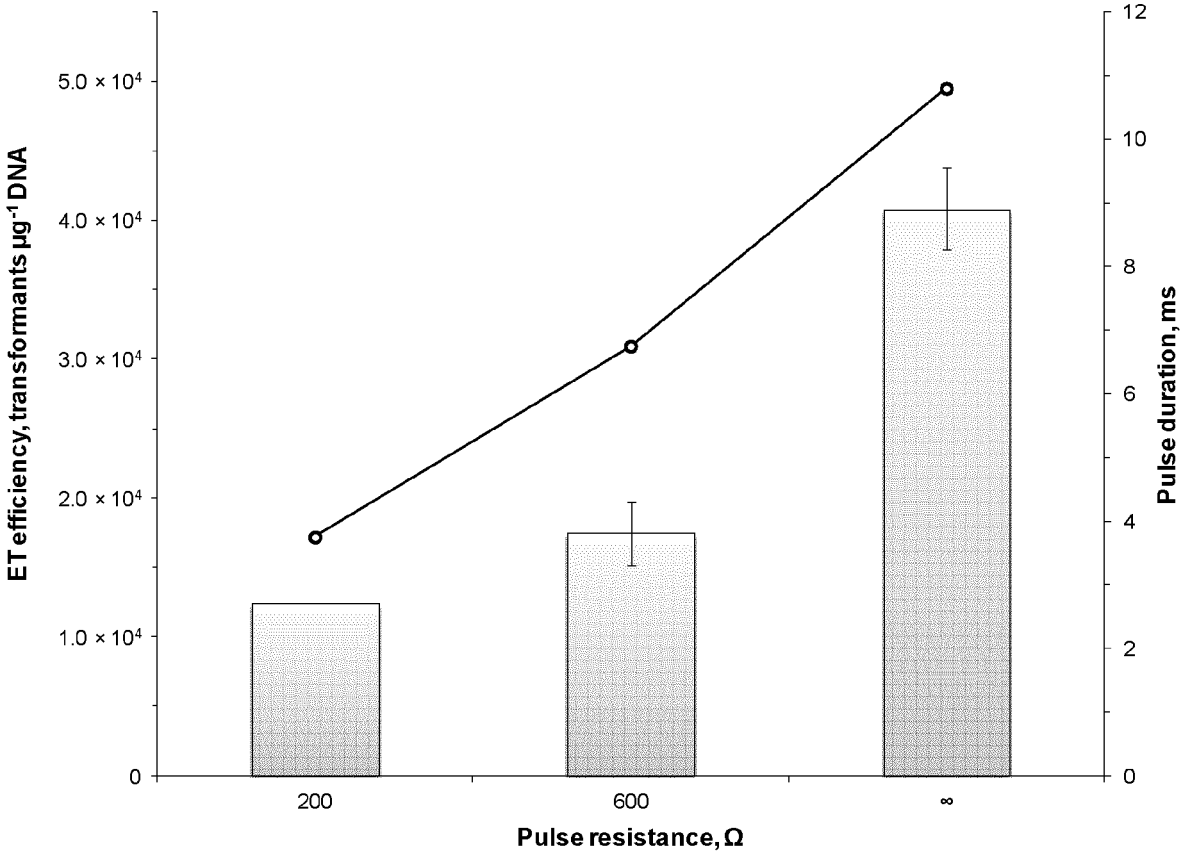

ET efficiency, transformants µg-1 DNA
5.0 × 10⁴
4.0 × 10⁴
3.0 × 10⁴
2.0 × 10⁴
1.0 × 10⁴
0
12
10
8
6
4
2
0
Pulse duration, ms
200
600
∞
Pulse resistance, Ω

FIG. 5C

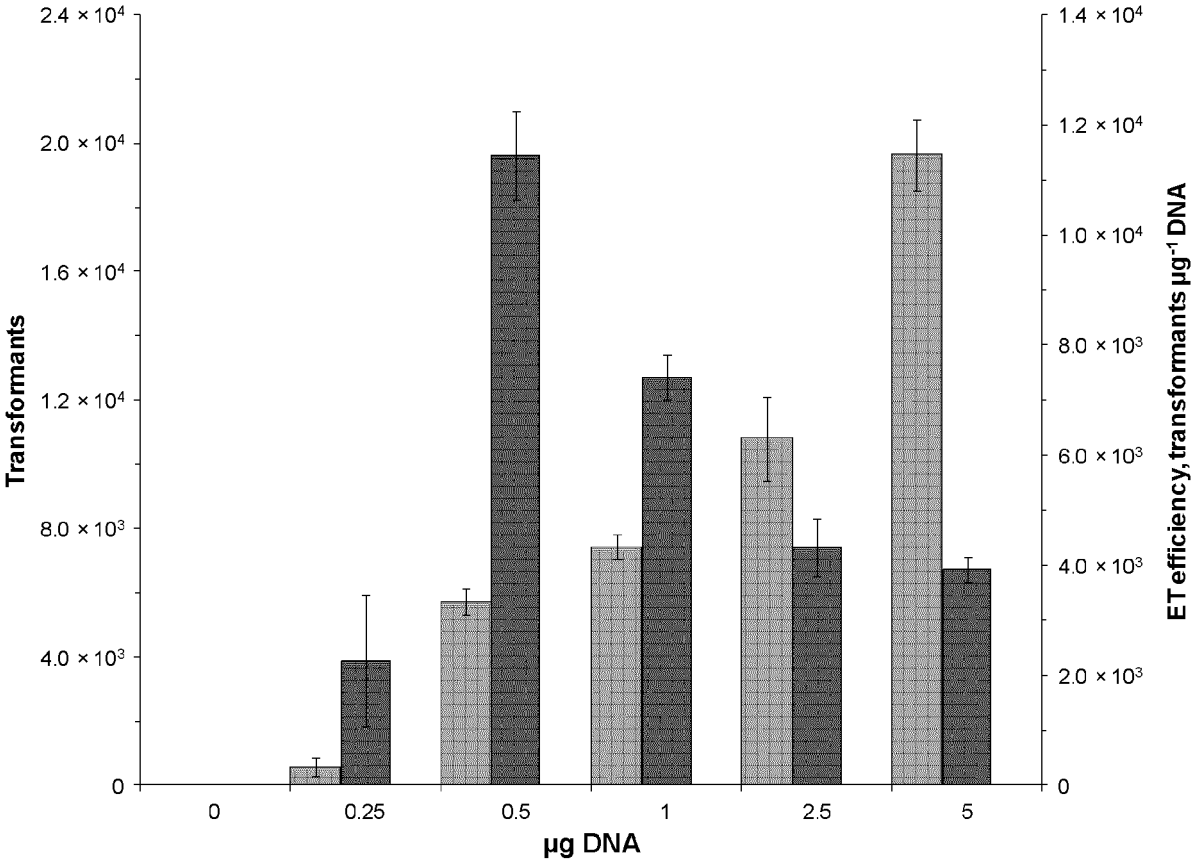

Transformants
ET efficiency, transformants µg-1 DNA
µg DNA
0
0.25
0.5
1
2.5
5
2.4 × 10^4
2.0 × 10^4
1.6 × 10^4
1.2 × 10^4
8.0 × 10^3
4.0 × 10^3
0
1.4 × 10^4
1.2 × 10^4
1.0 × 10^4
8.0 × 10^3
6.0 × 10^3
4.0 × 10^3
2.0 × 10^3
0

FIG. 6A

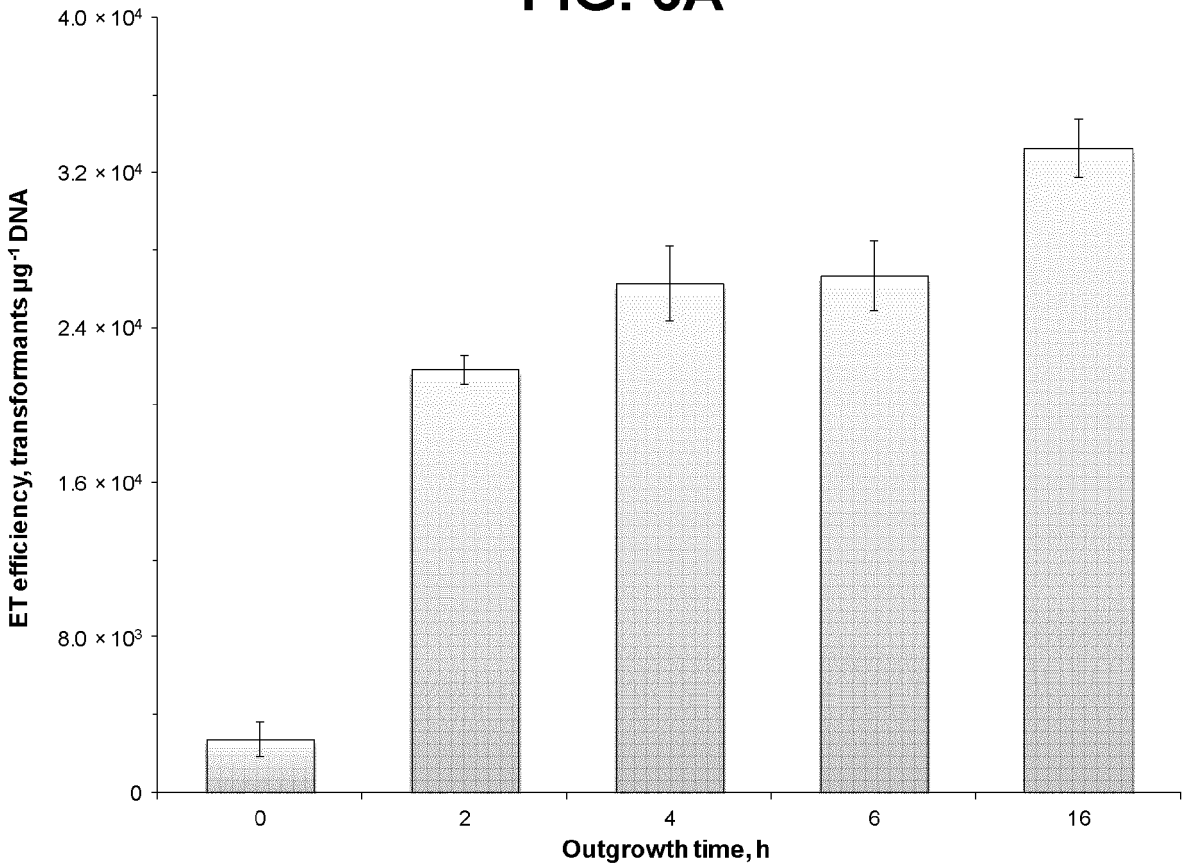

ET efficiency, transformants µg-1 DNA
Outgrowth time, h
0
2
4
6
16
4.0 × 10^4
3.2 × 10^4
2.4 × 10^4
1.6 × 10^4
8.0 × 10^3
0

FIG. 6B