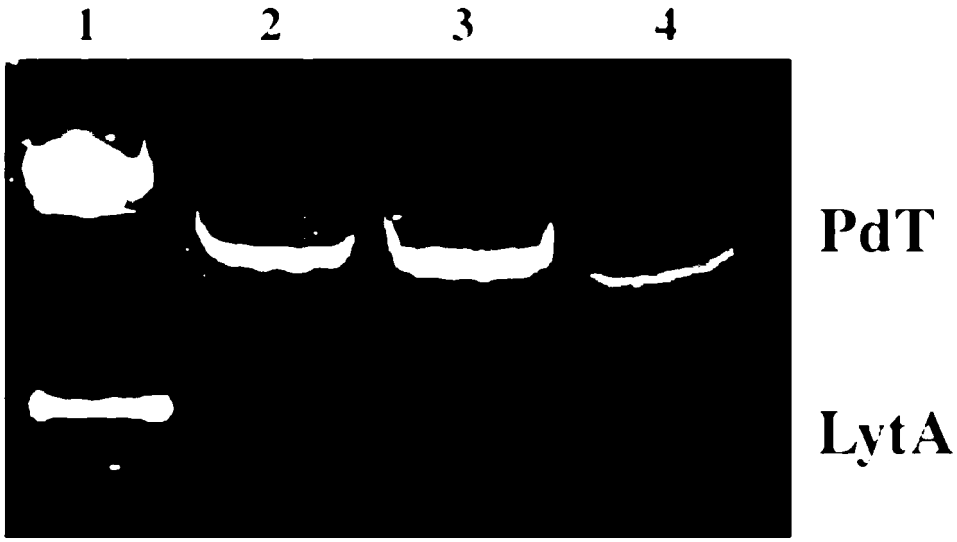


FIGURE ONE

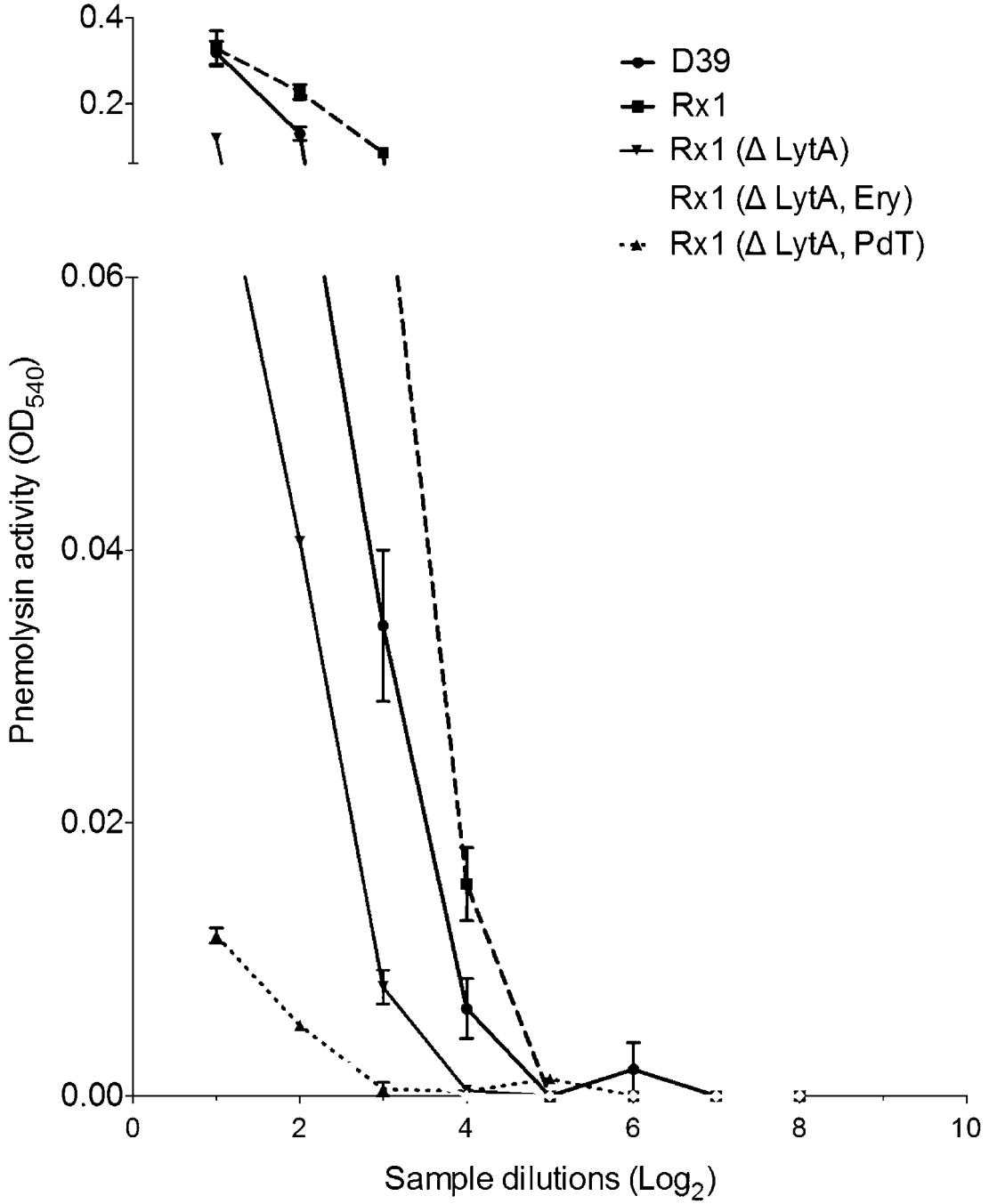

0.4
0.2
0.06
0.04
0.02
0.00
Pnemolysin activity (OD_{540})
0
2
4
6
8
10
Sample dilutions (Log_2)
D39
Rx1
Rx1 (Δ LytA)
Rx1 (Δ LytA, Ery)
Rx1 (Δ LytA, PdT)

FIGURE TWO



FIGURE THREE

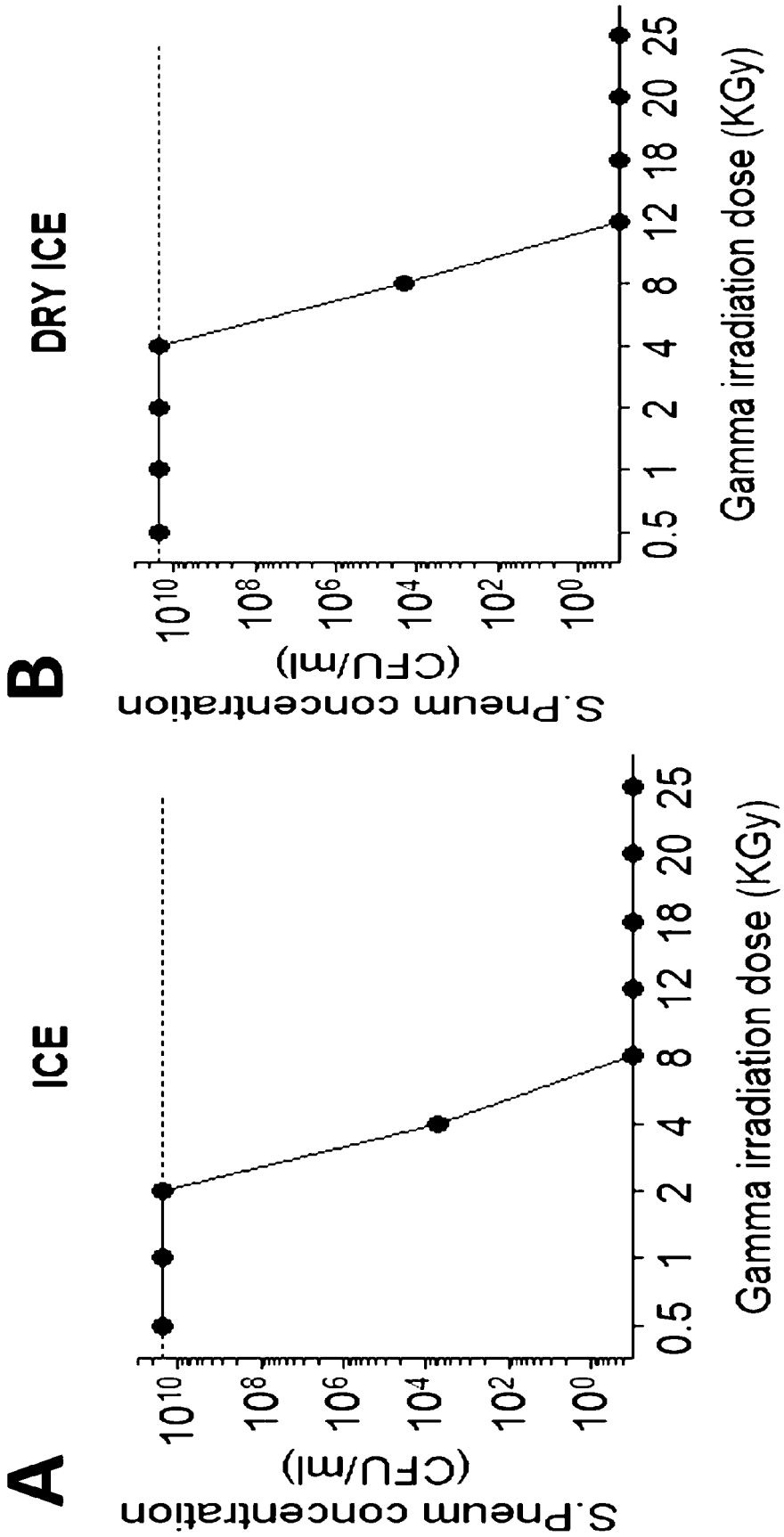

A
ICE
S.Pneum concentration (CFU/ml)
10^{10}
10^{8}
10^{6}
10^{4}
10^{2}
10^{0}
0.5 1 2 4 8 12 18 20 25
Gamma irradiation dose (KGy)
B
DRY ICE
S.Pneum concentration (CFU/ml)
10^{10}
10^{8}
10^{6}
10^{4}
10^{2}
10^{0}
0.5 1 2 4 8 12 18 20 25
Gamma irradiation dose (KGy)

FIGURE FOUR

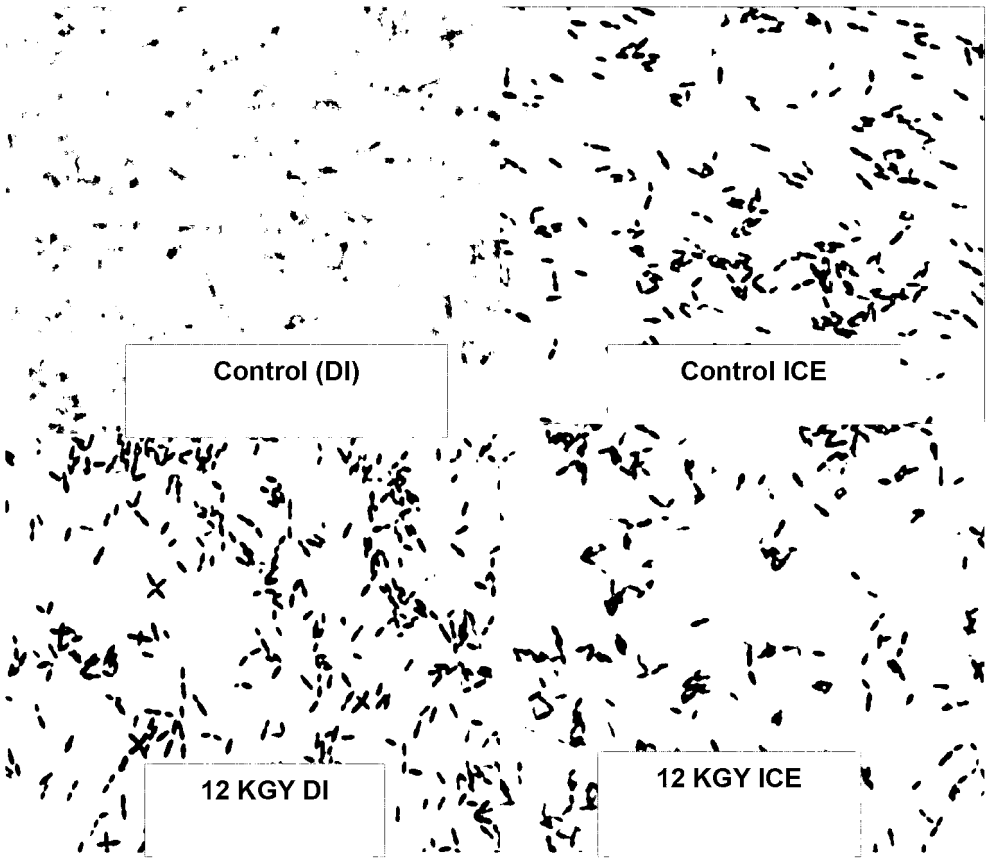


FIGURE FIVE

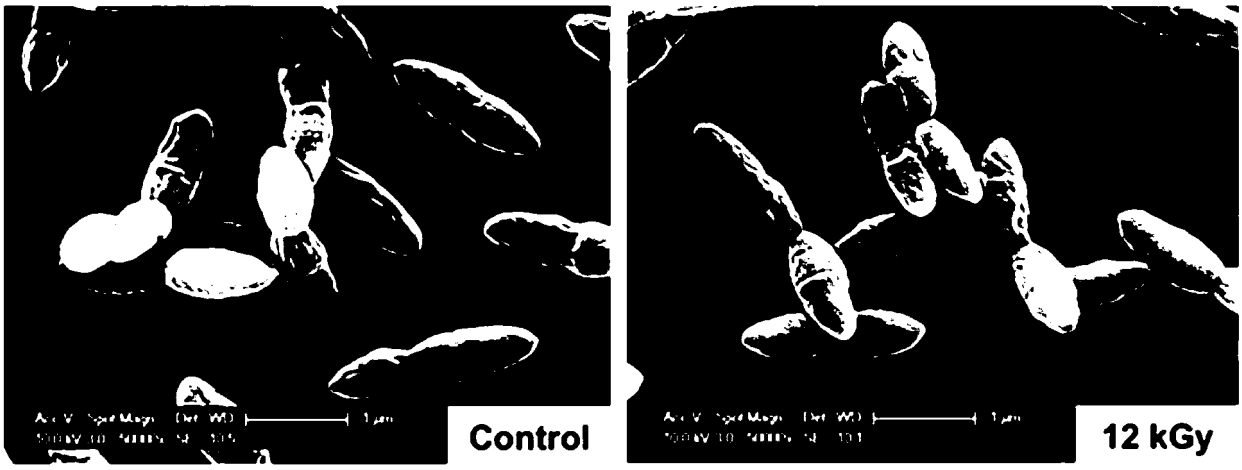


FIGURE SIX

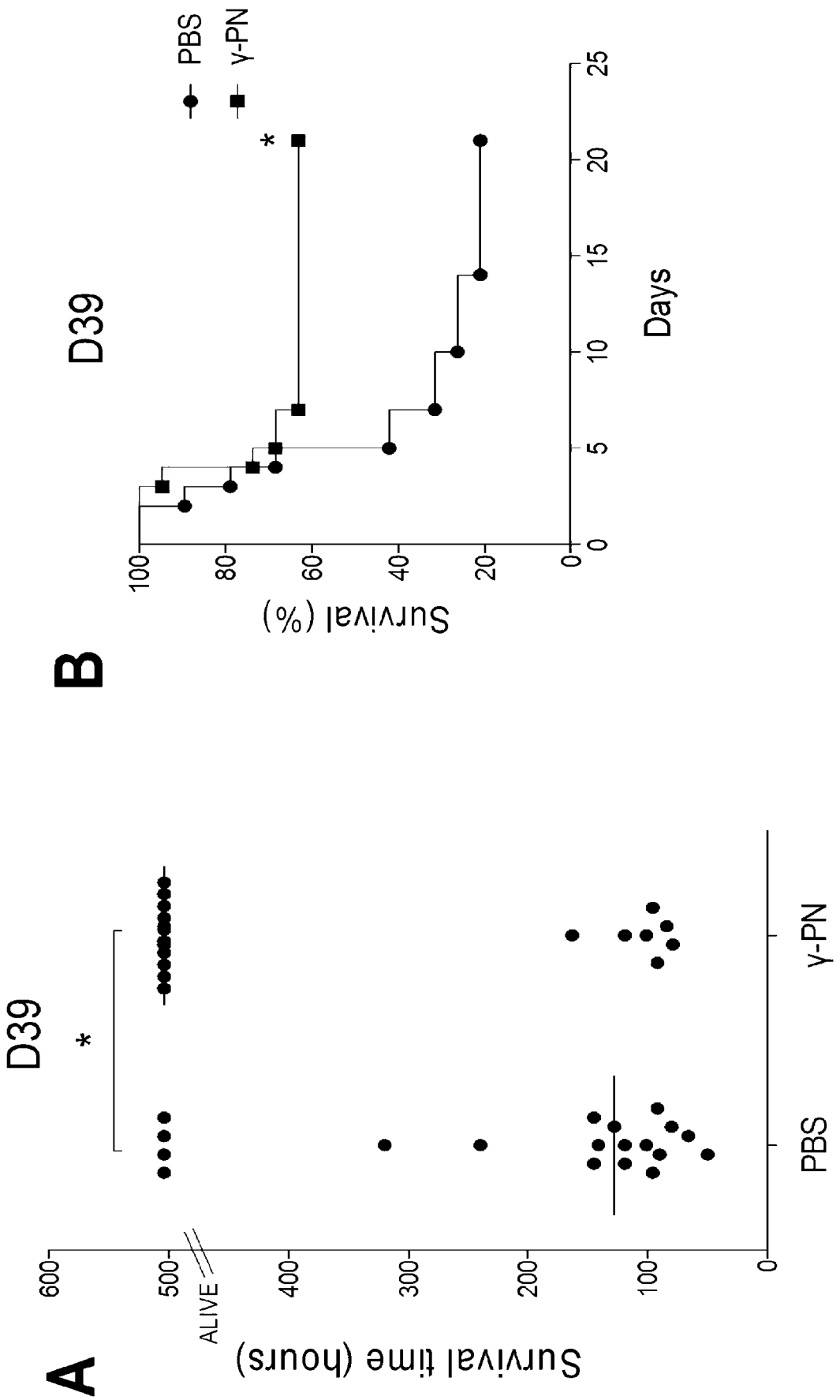


FIGURE SEVEN

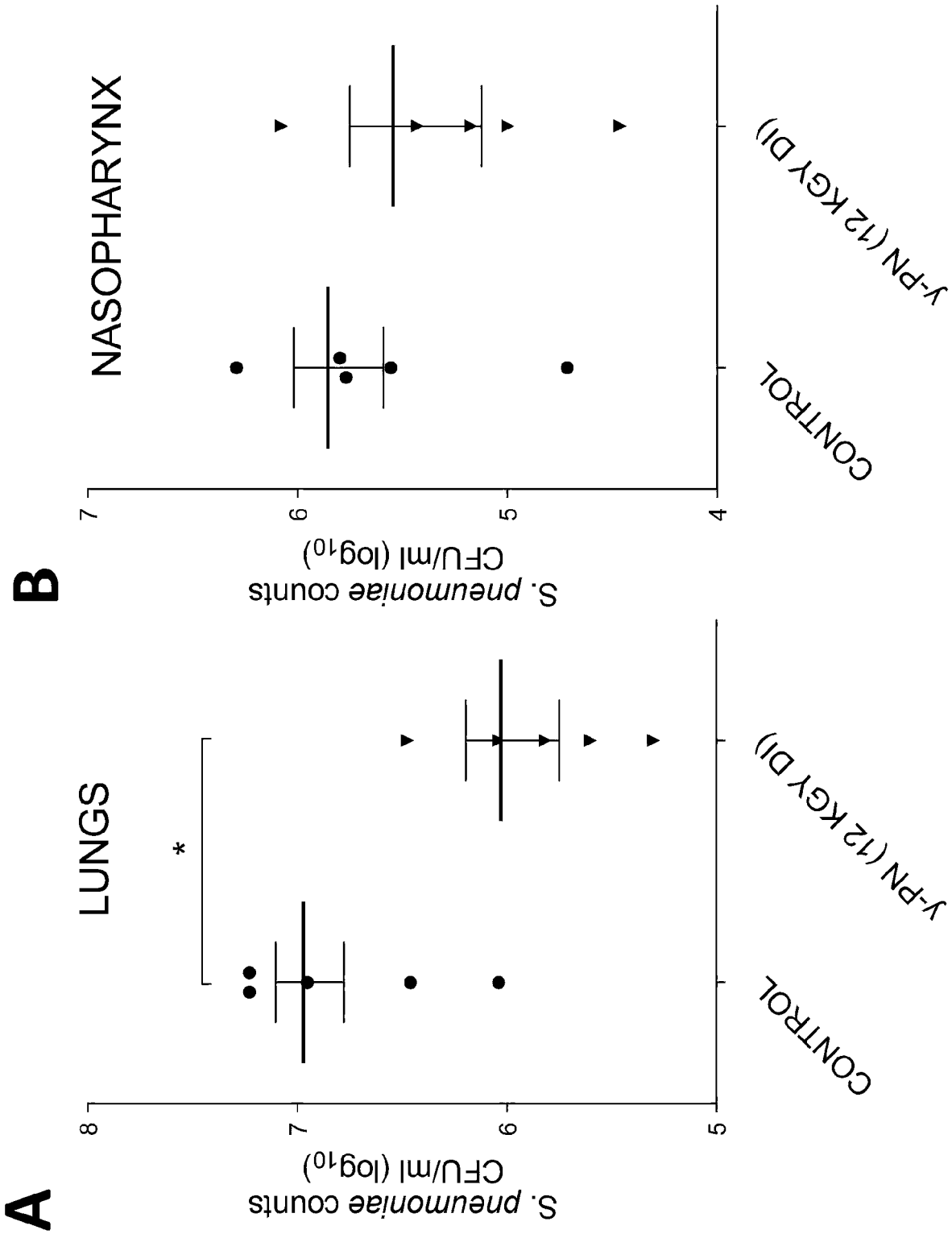


FIGURE EIGHT

C

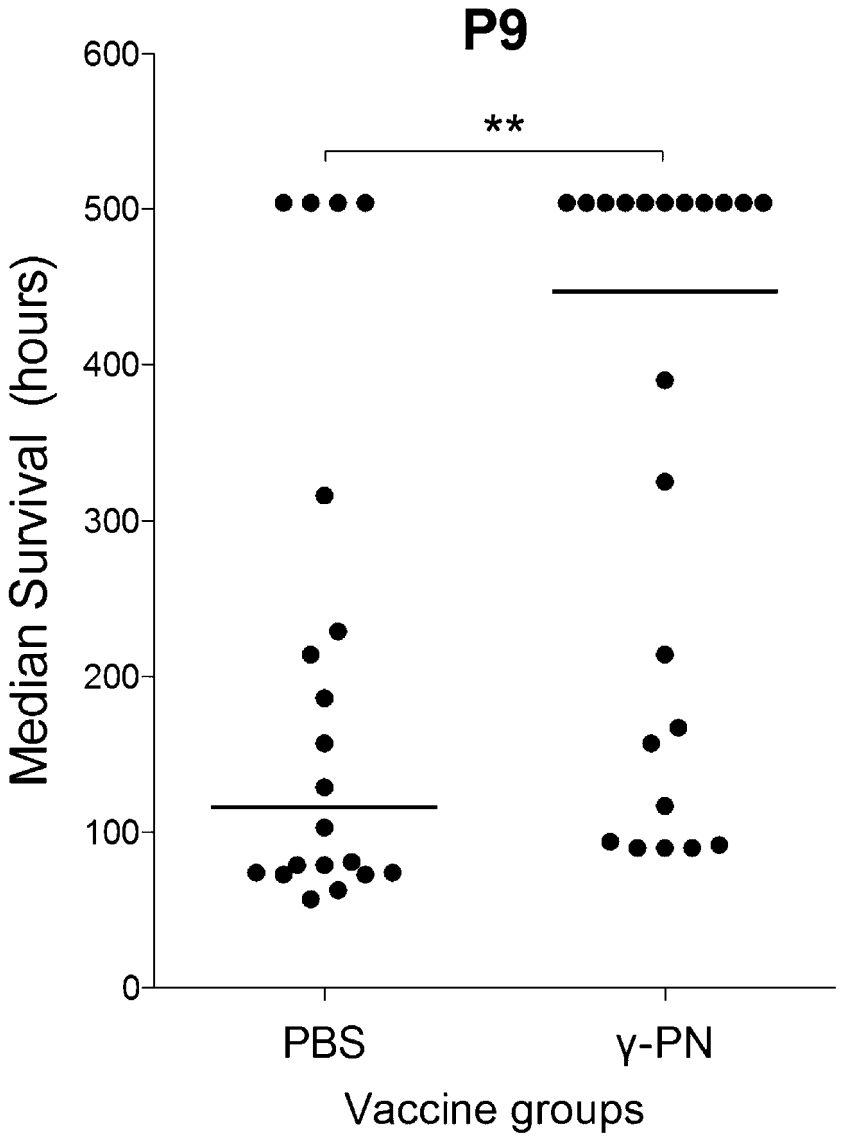


FIGURE EIGHT (CONTINUED)

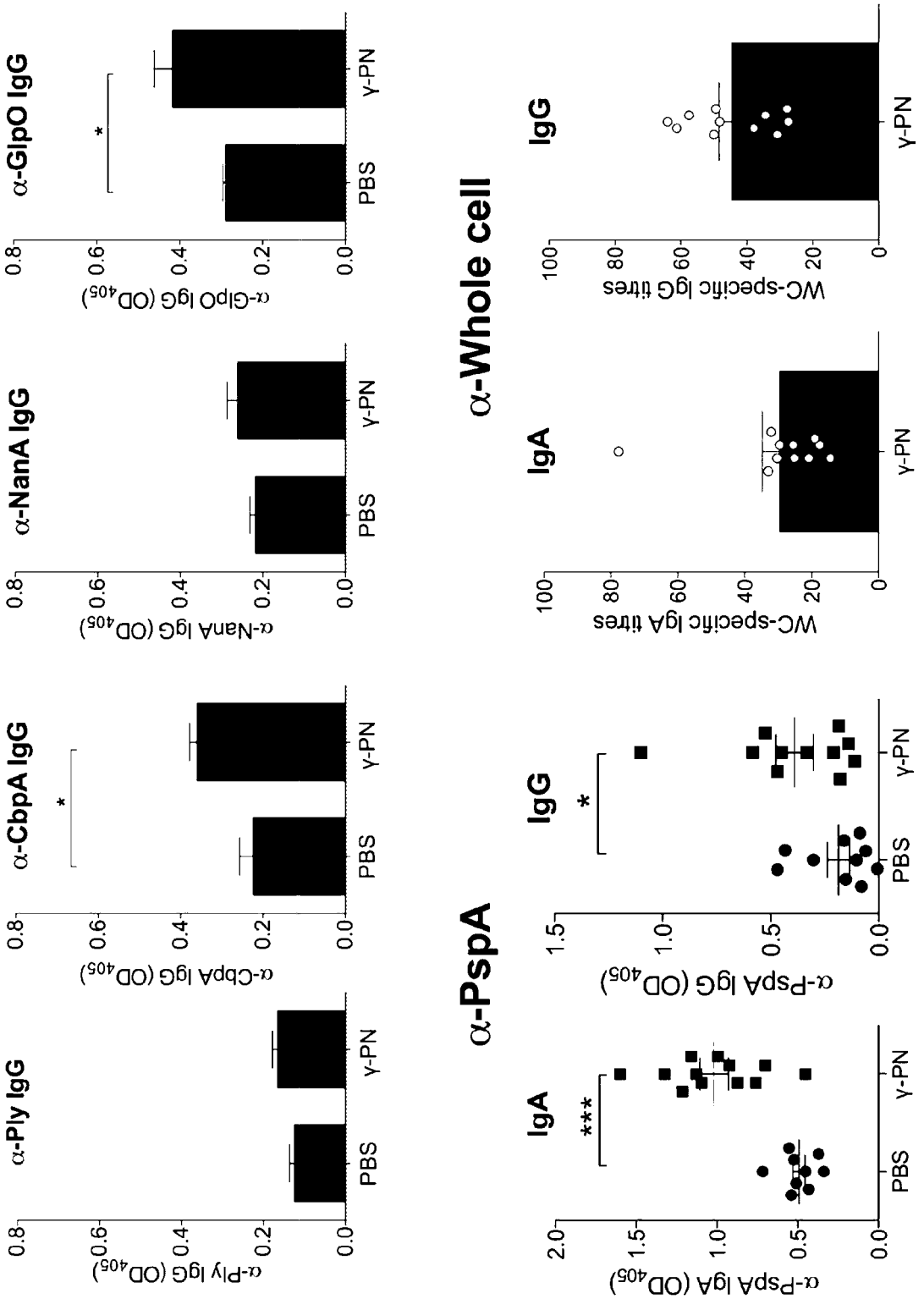

α-Ply IgG
α-Ply IgG (OD405)
α-CbpA IgG
α-CbpA IgG (OD405)
α-NanA IgG
α-NanA IgG (OD405)
α-GlpO IgG
α-GlpO IgG (OD405)
α-PspA
IgA
α-PspA IgA (OD405)
IgG
α-PspA IgG (OD405)
α-Whole cell
IgA
WC-specific IgA titres
IgG
WC-specific IgG titres
PBS
γ-PN
*
***

FIGURE NINE

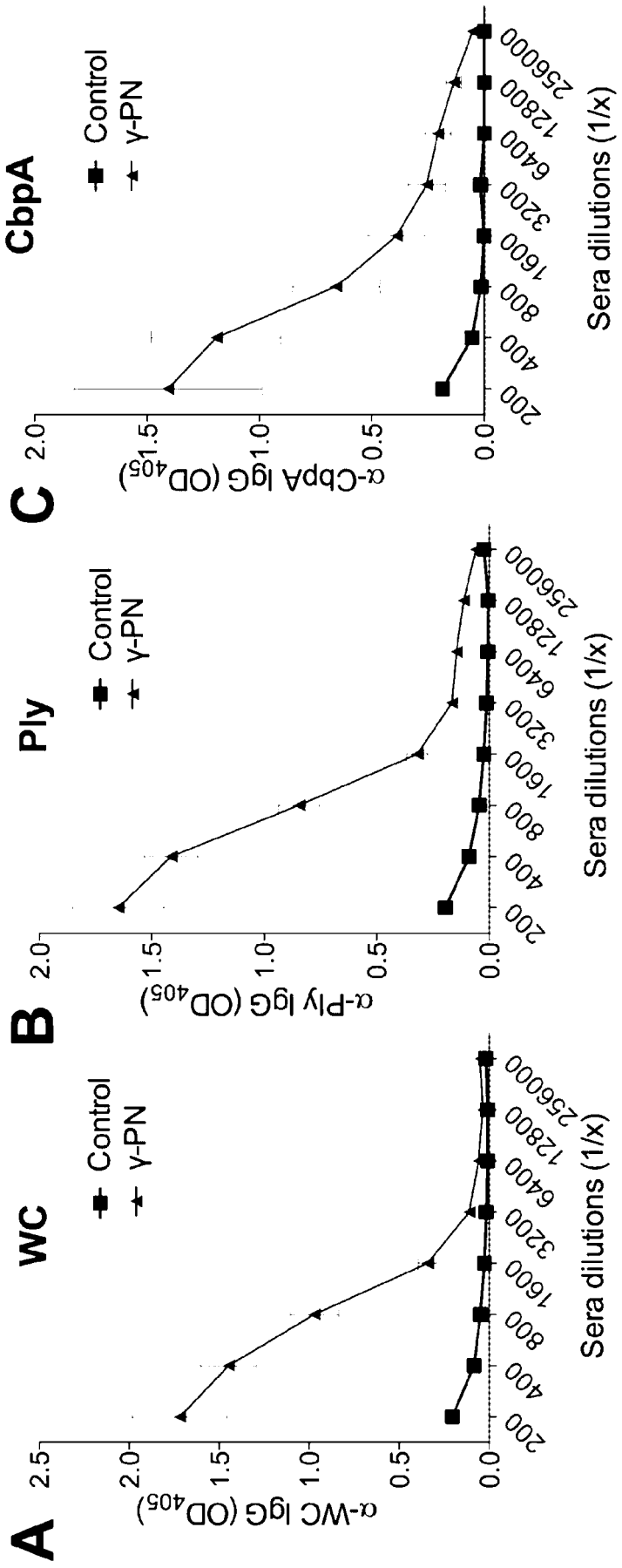

A
WC
α-WC IgG (OD405)
2.5
2.0
1.5
1.0
0.5
0.0
Control
γ-PN
200
400
800
1600
3200
6400
12800
256000
Sera dilutions (1/x)
B
Ply
α-Ply IgG (OD405)
2.0
1.5
1.0
0.5
0.0
Control
γ-PN
200
400
800
1600
3200
6400
12800
256000
Sera dilutions (1/x)
C
CbpA
α-CbpA IgG (OD405)
2.0
1.5
1.0
0.5
0.0
Control
γ-PN
200
400
800
1600
3200
6400
12800
256000
Sera dilutions (1/x)

FIGURE TEN

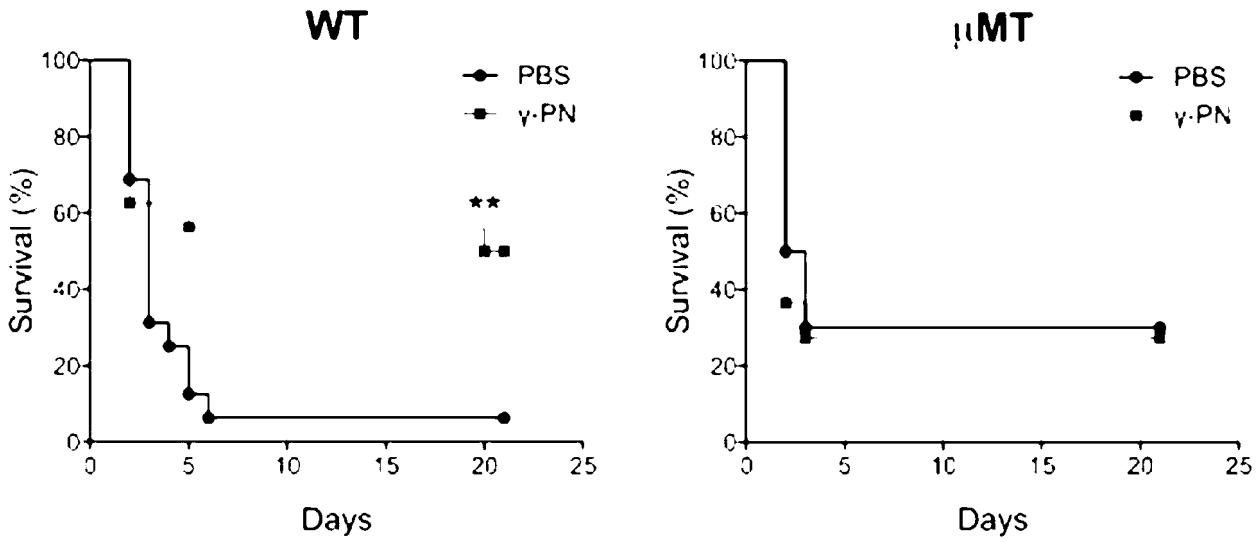


FIGURE ELEVEN

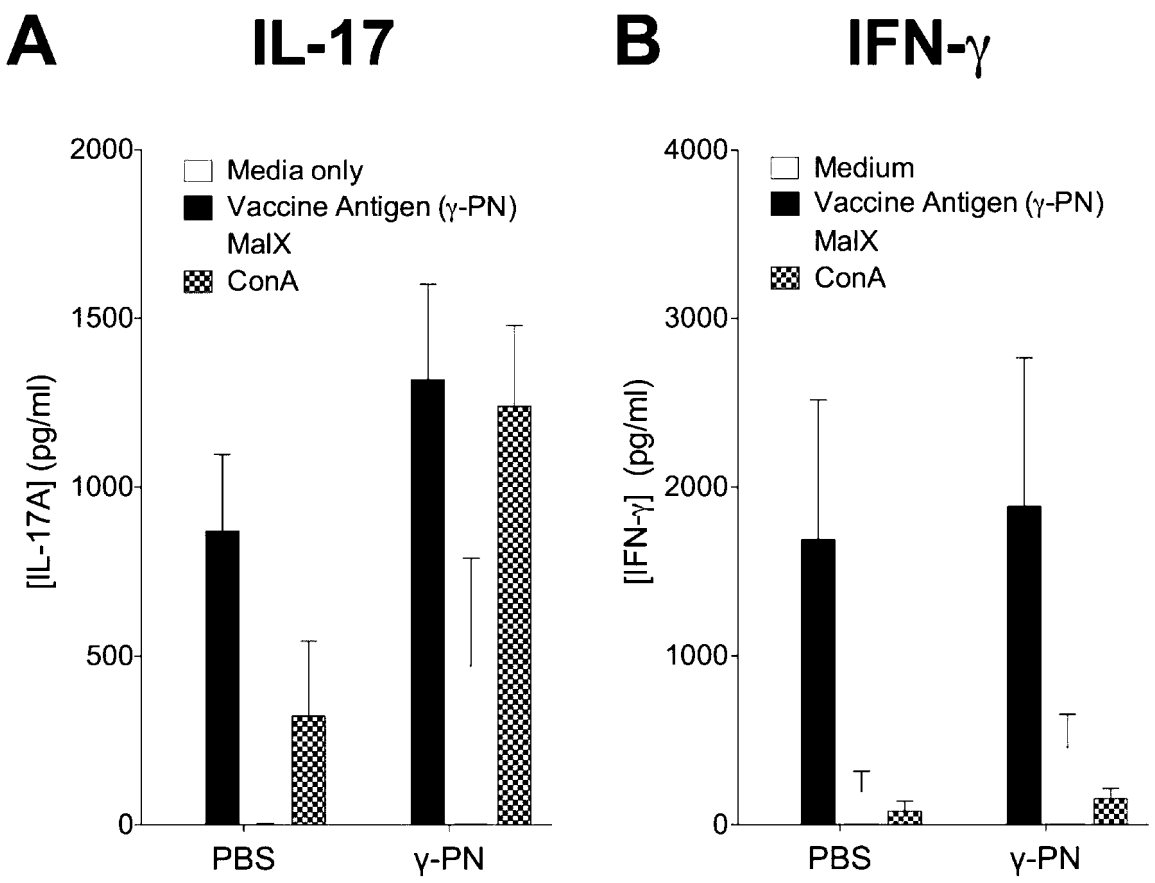


FIGURE TWELVE

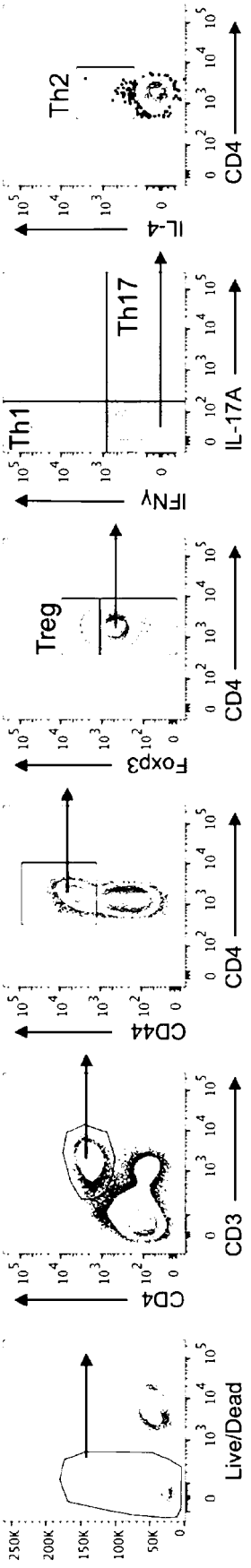


FIGURE TWELVE (CONTINUED)

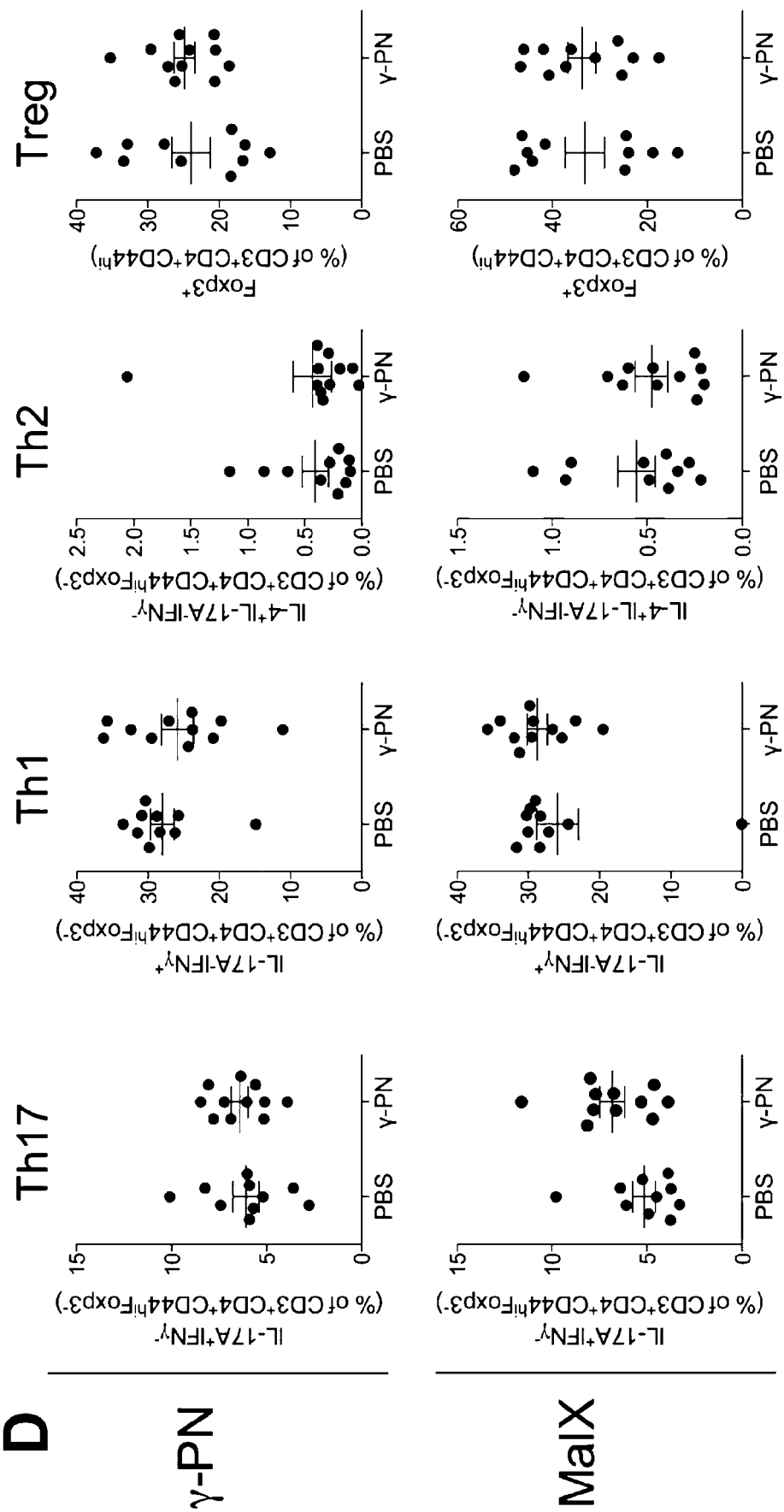


FIGURE TWELVE (CONTINUED)

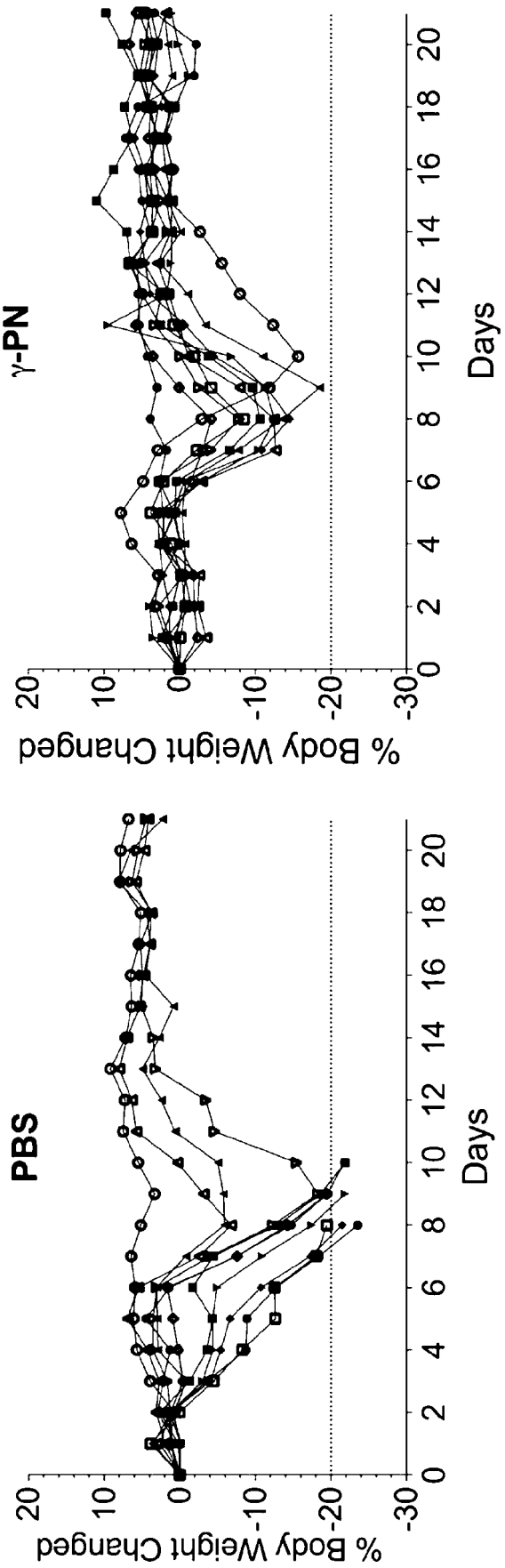


FIGURE THIRTEEN

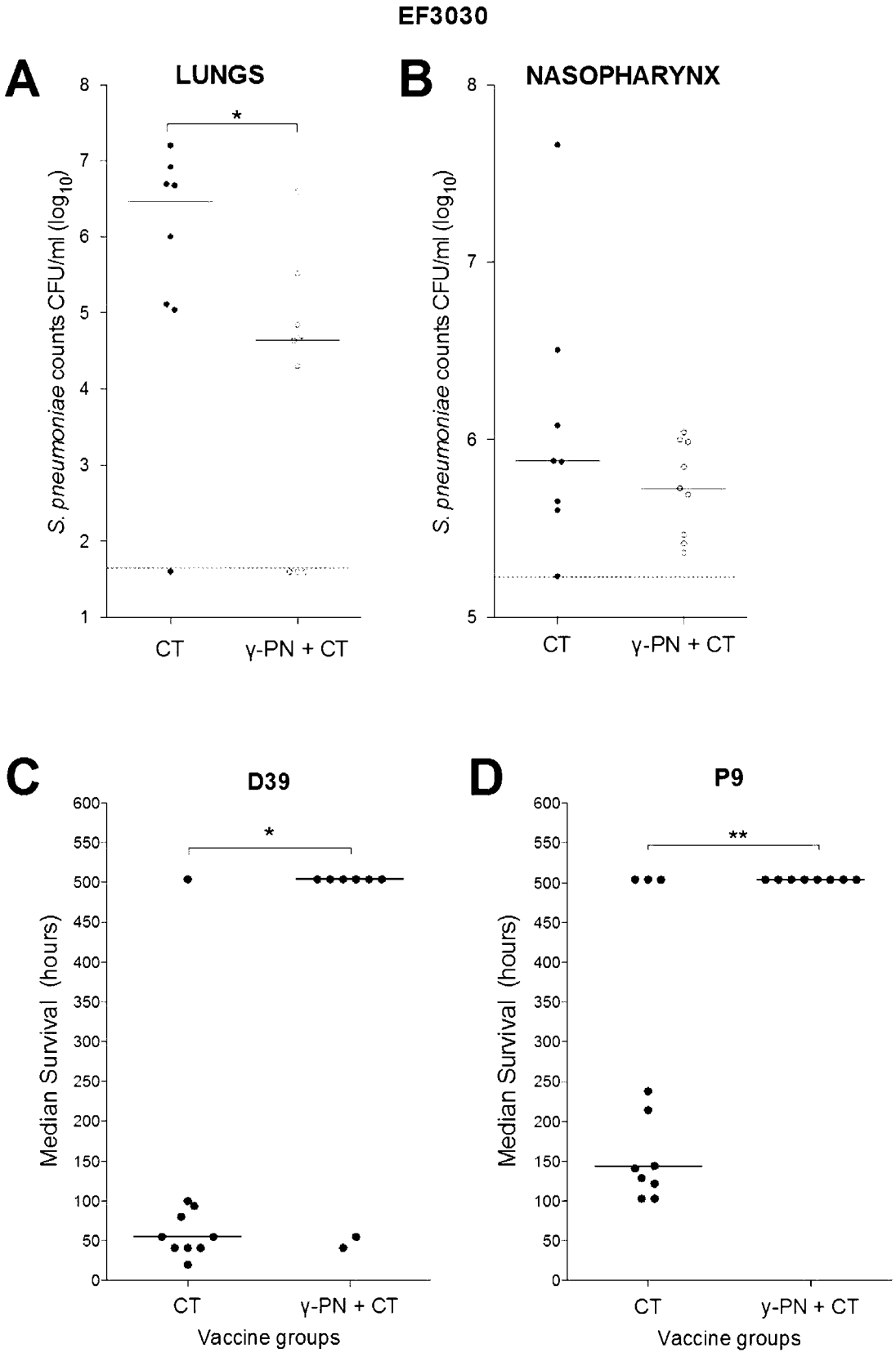


FIGURE FOURTEEN

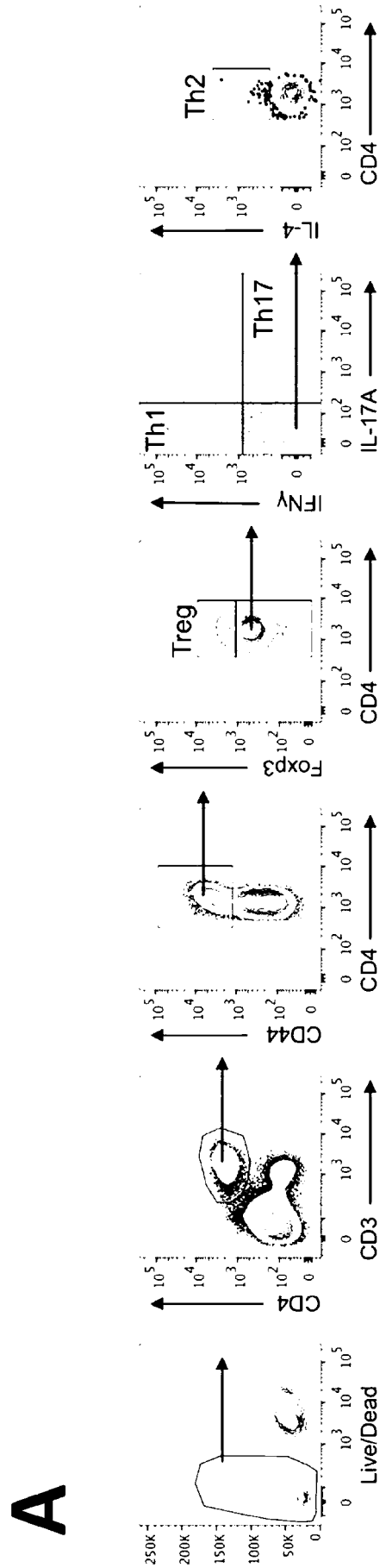


FIGURE FIFTEEN

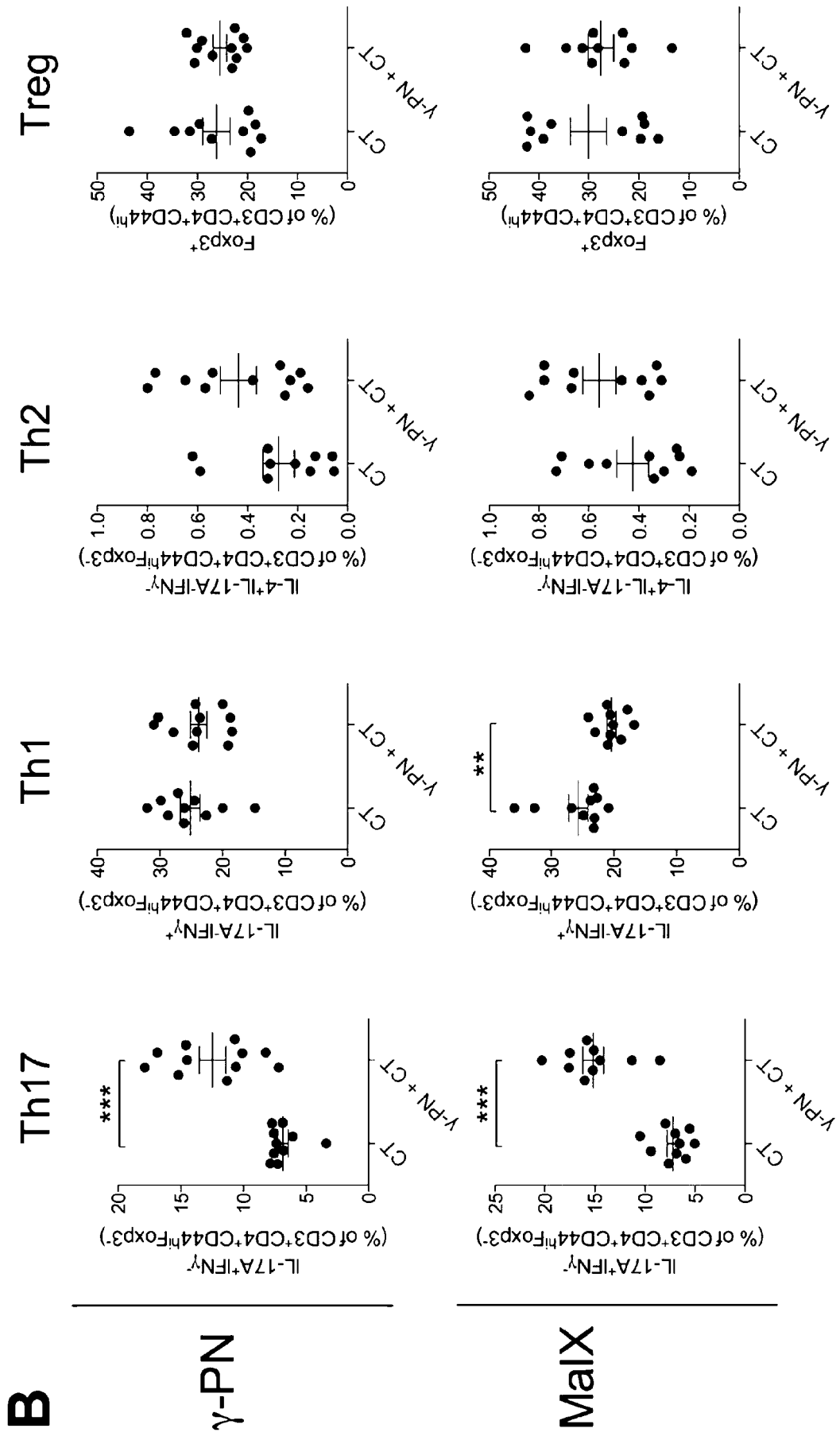


FIGURE FIFTEEN (CONTINUED)

C

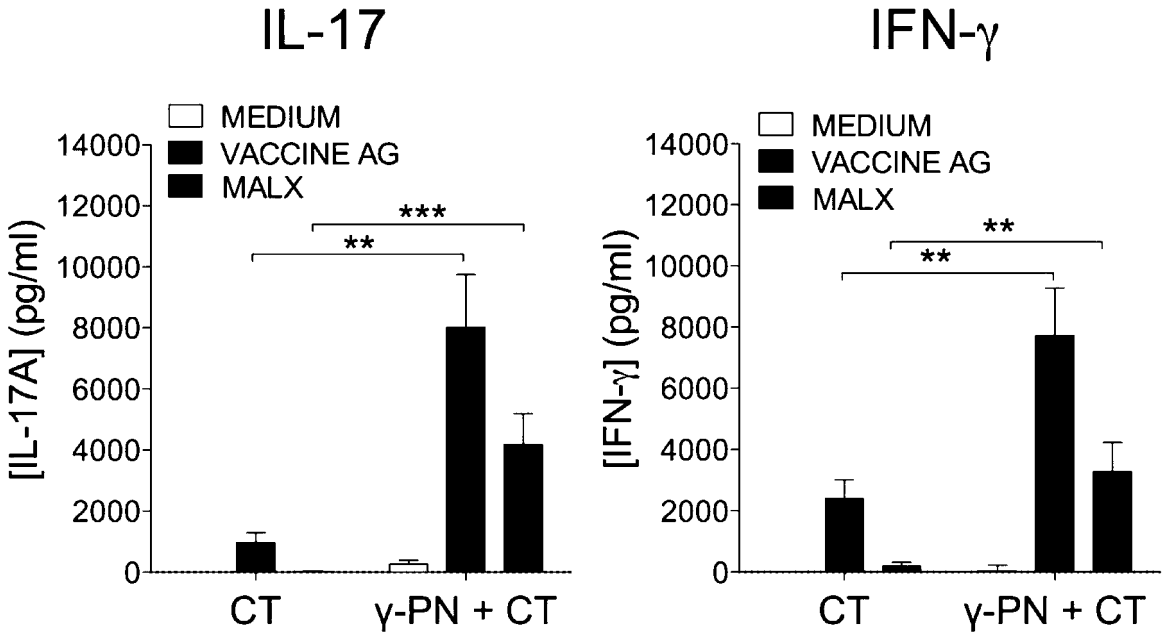


FIGURE FIFTEEN (CONTINUED)

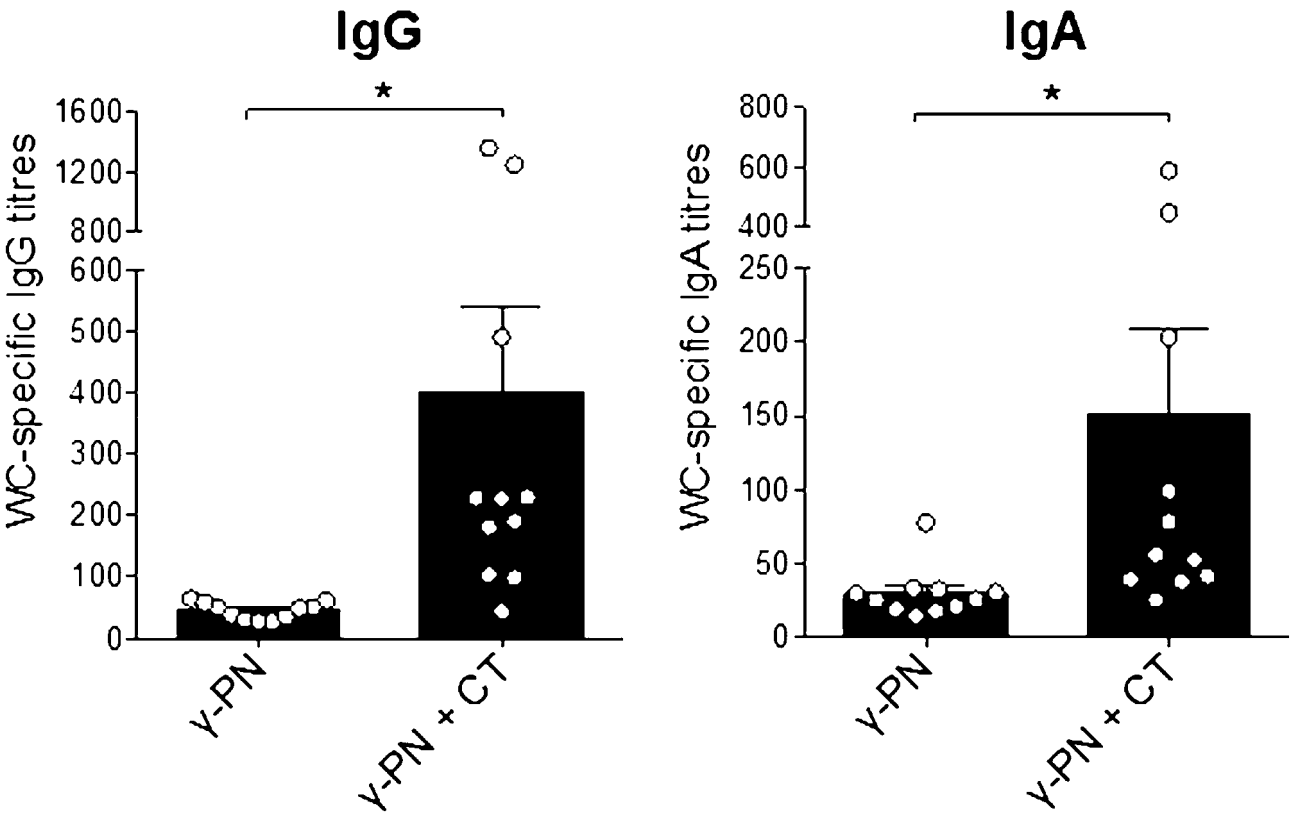


FIGURE SIXTEEN

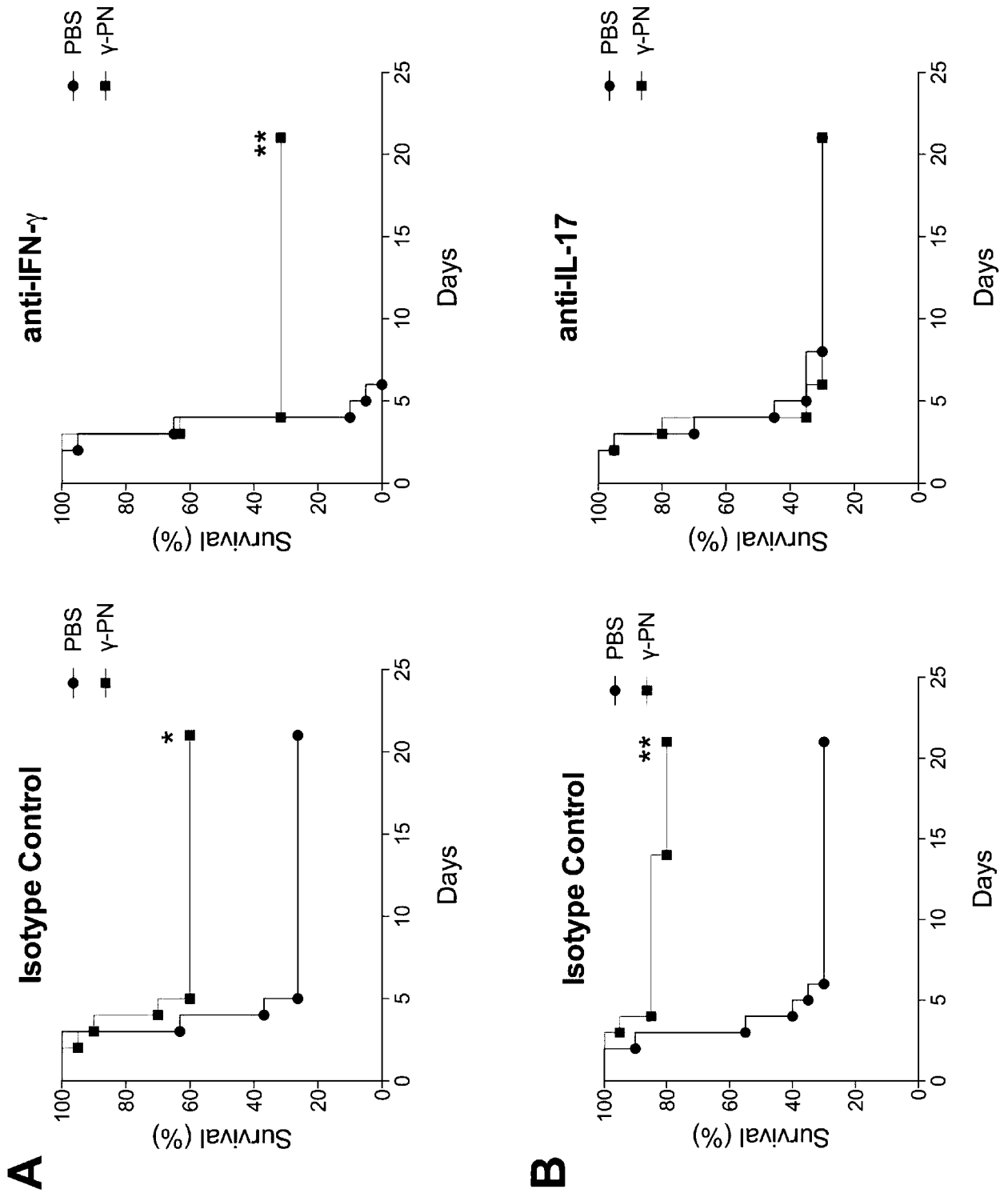


FIGURE SEVENTEEN

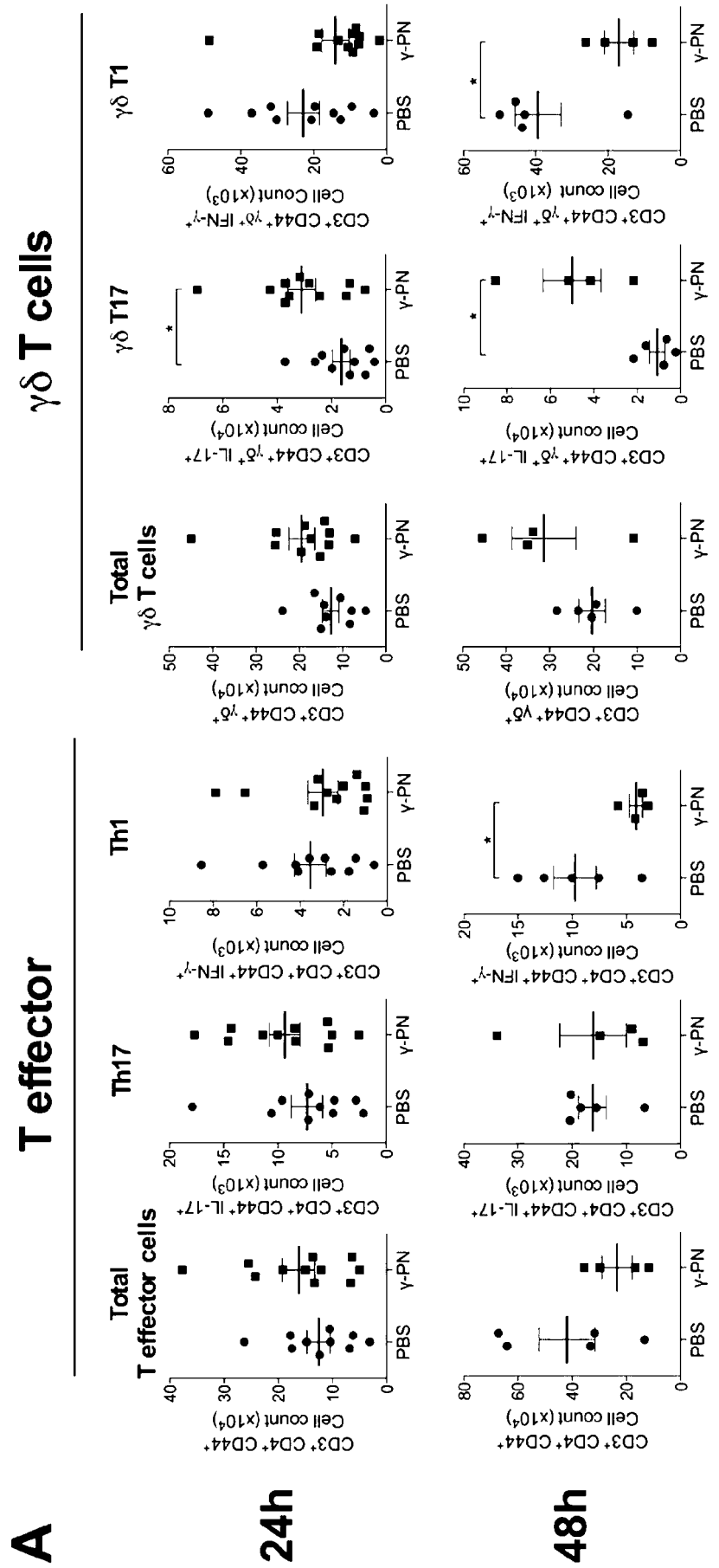
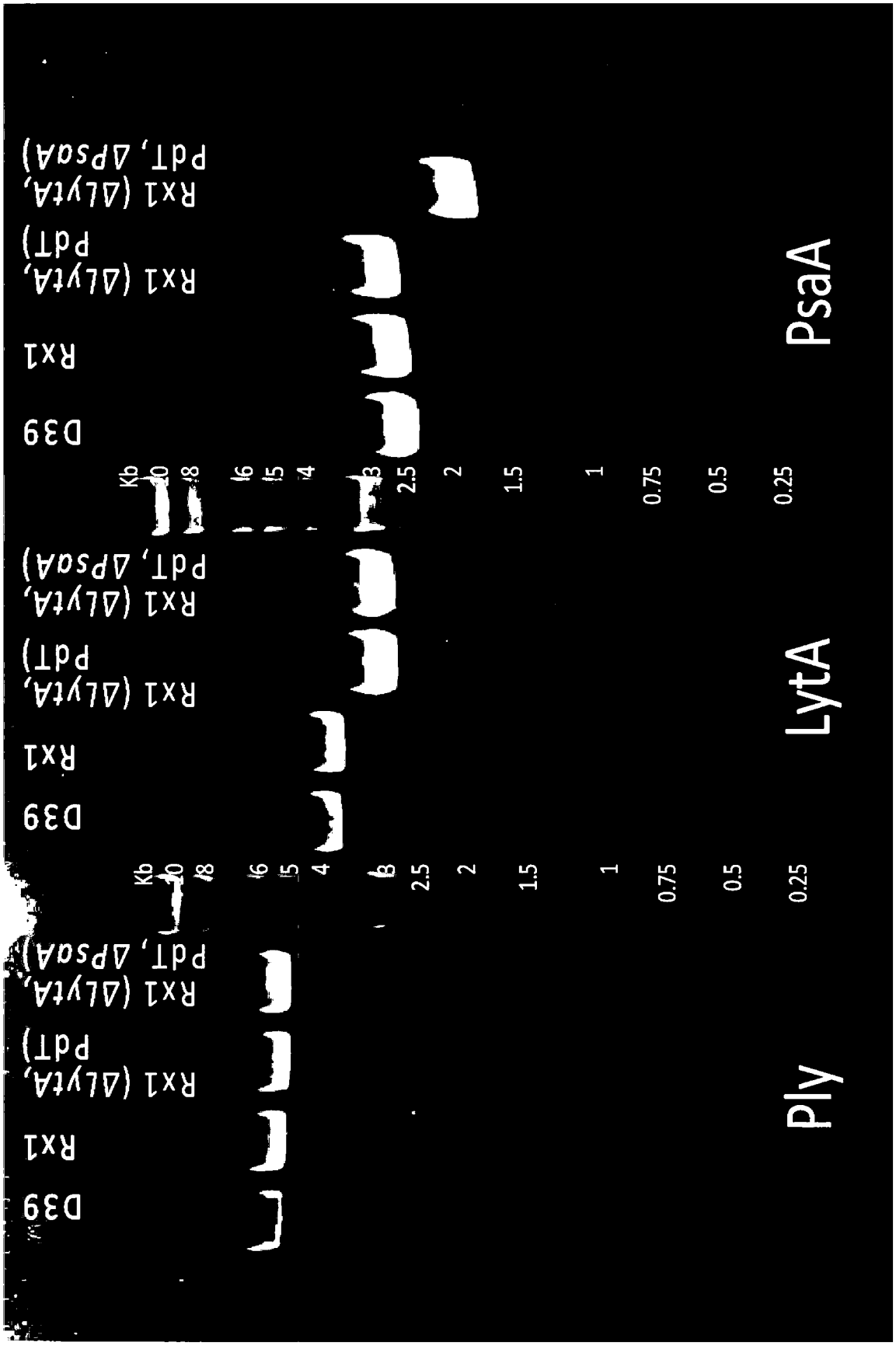


FIGURE EIGHTEEN



A

FIGURE NINETEEN

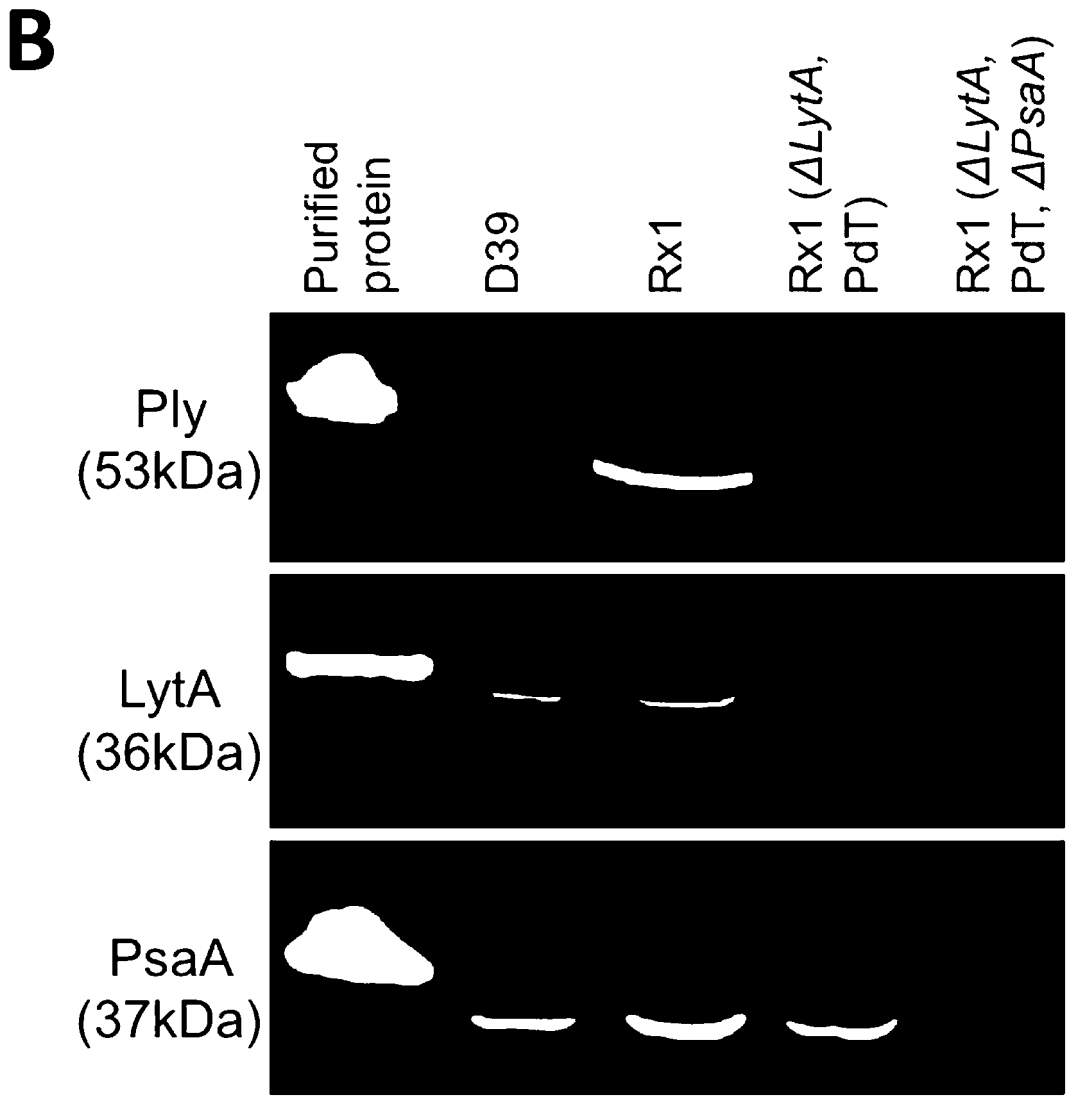


FIGURE NINETEEN (CONTINUED)

C

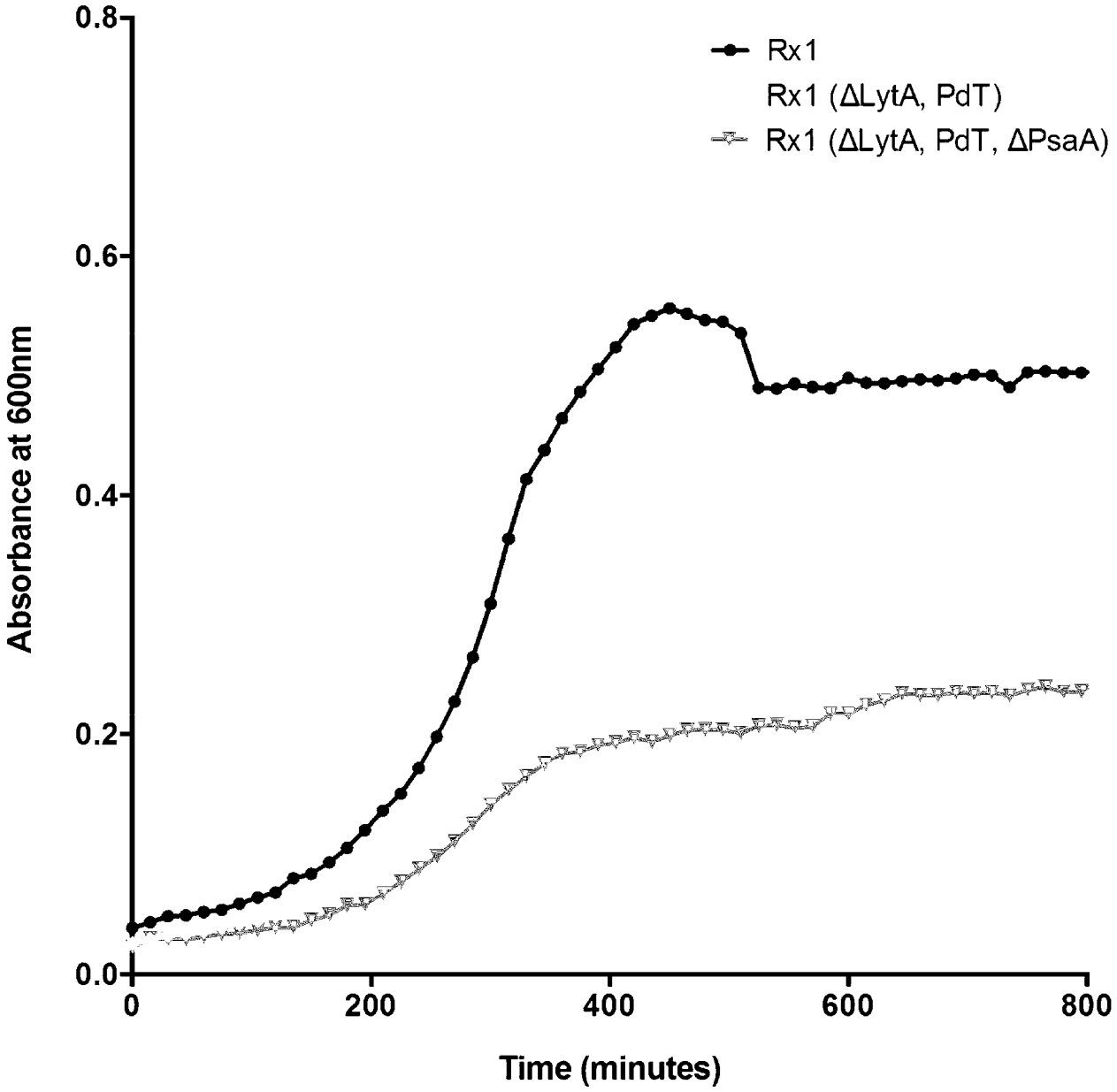


FIGURE NINETEEN (CONTINUED)

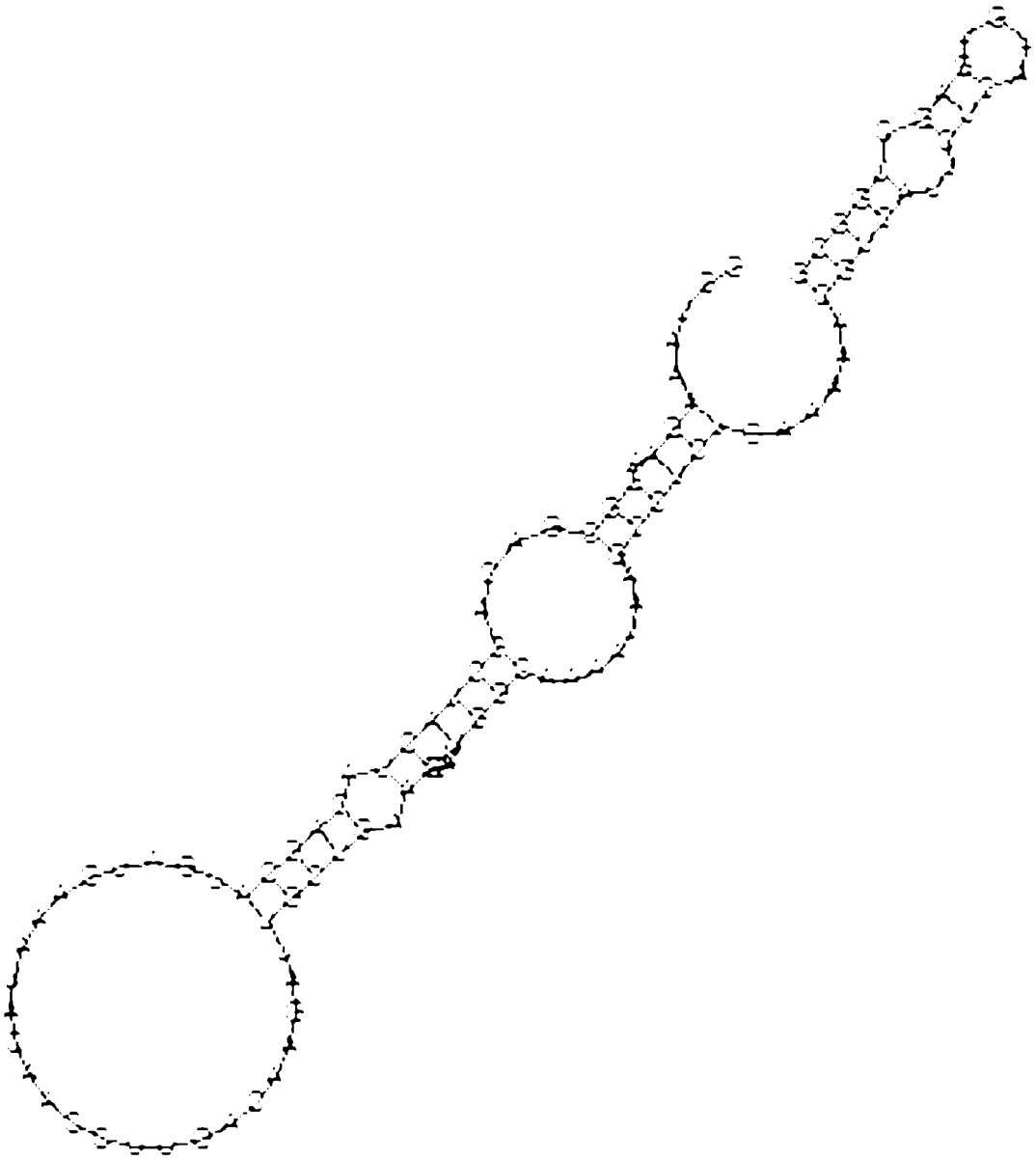


FIGURE TWENTY

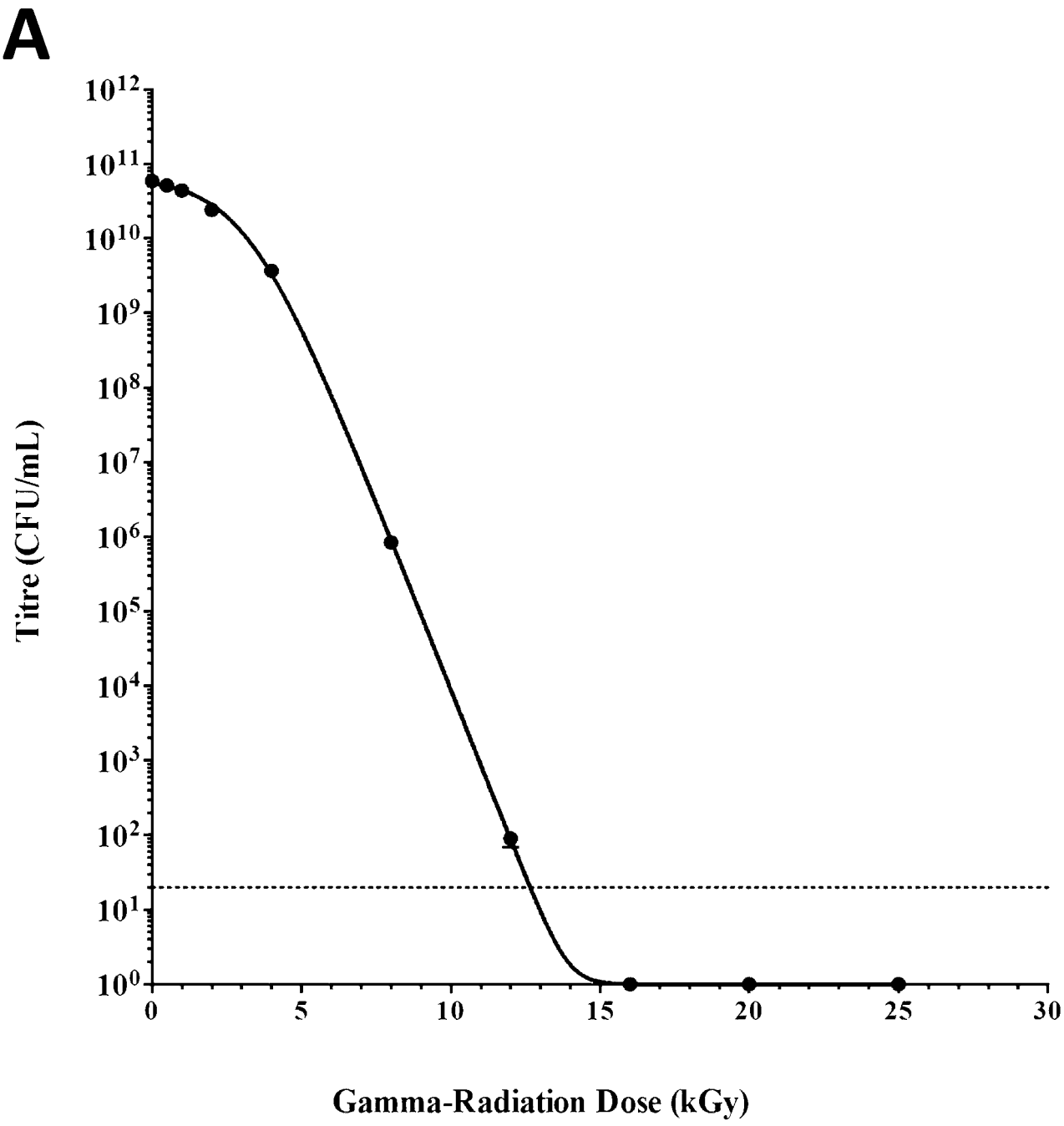


FIGURE TWENTY-ONE

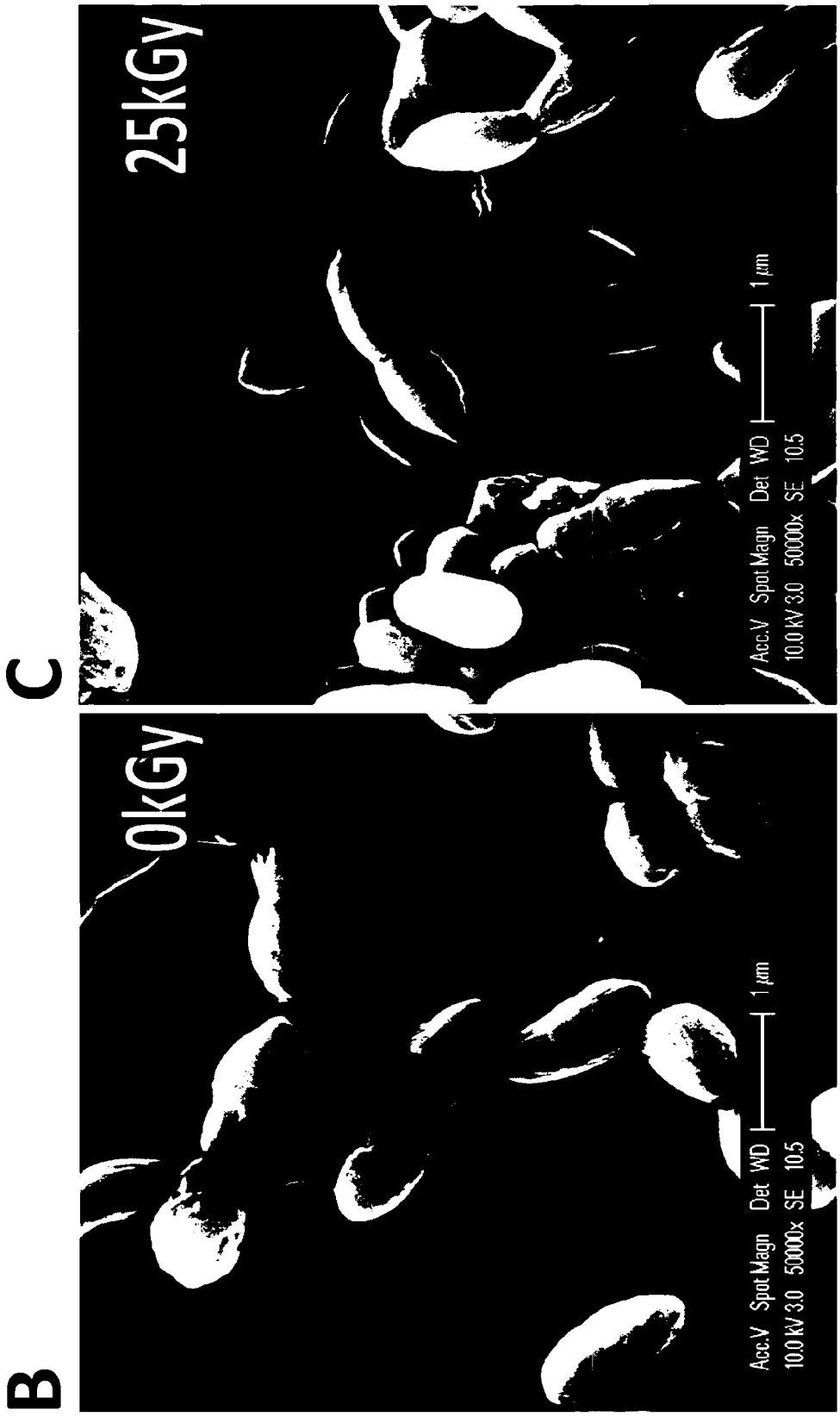


FIGURE TWENTY-ONE (CONTINUED)