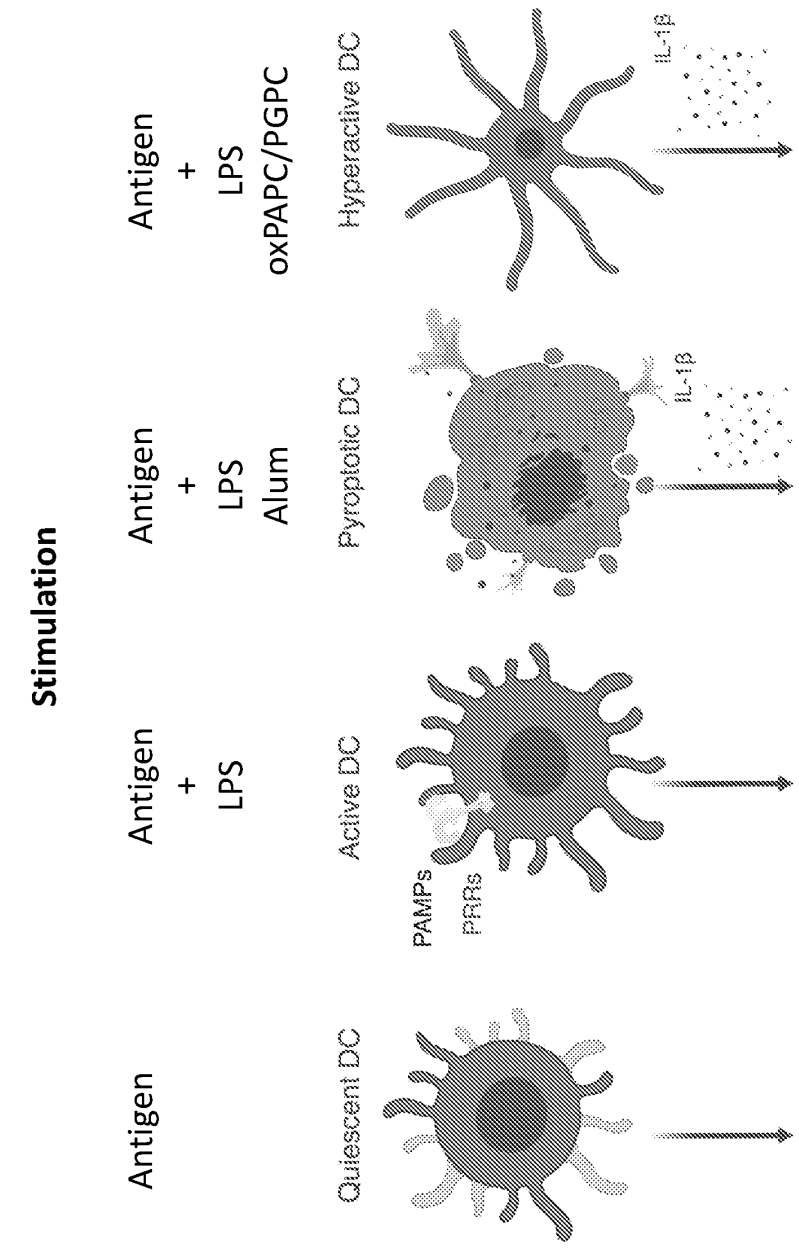

Stimulation
Antigen
Antigen + LPS
Antigen + LPS Alum
Antigen + LPS oxPAPC/PGPC
Quiescent DC
Active DC
Pyroptotic DC
Hyperactive DC
PAMPs
PRRs
IL-1β
IL-1β
Adaptive T Cell Responses

FIG. 1

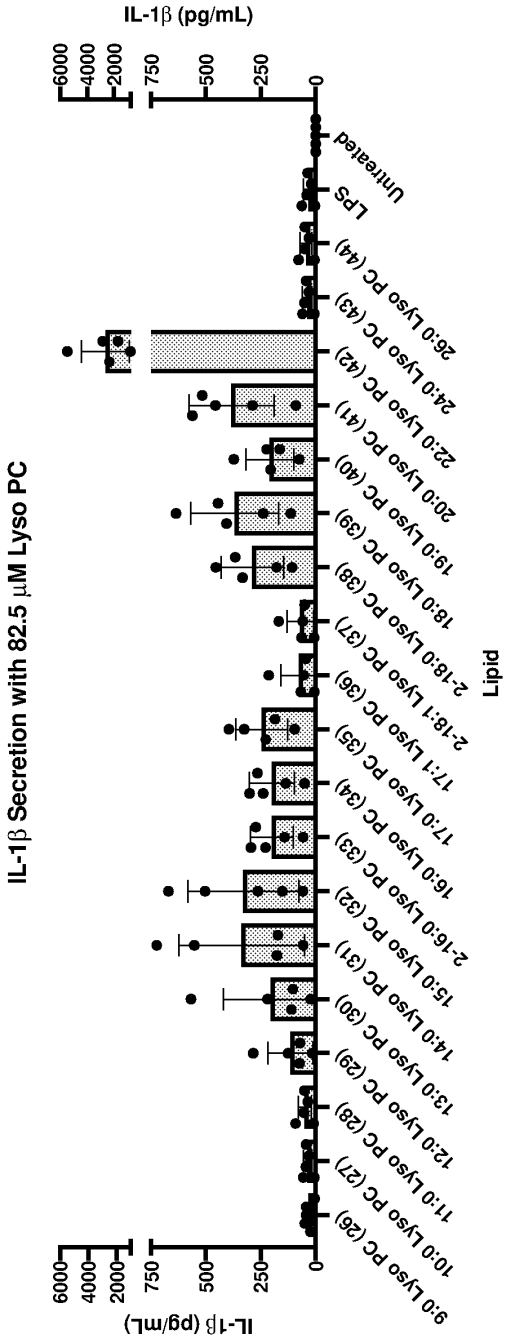

IL-1β Secretion with 82.5 μM Lyso PC
IL-1β (pg/mL)
6000
4000
2000
750
500
250
0
Untreated
LPS
26:0 Lyso PC (44)
24:0 Lyso PC (43)
22:0 Lyso PC (42)
20:0 Lyso PC (41)
19:0 Lyso PC (40)
18:0 Lyso PC (39)
2-18:1 Lyso PC (38)
18:1 Lyso PC (37)
17:1 Lyso PC (36)
17:0 Lyso PC (35)
16:0 Lyso PC (34)
2-16:0 Lyso PC (33)
15:0 Lyso PC (32)
14:0 Lyso PC (31)
13:0 Lyso PC (30)
12:0 Lyso PC (29)
11:0 Lyso PC (28)
10:0 Lyso PC (27)
9:0 Lyso PC (26)
Lipid

FIG. 2

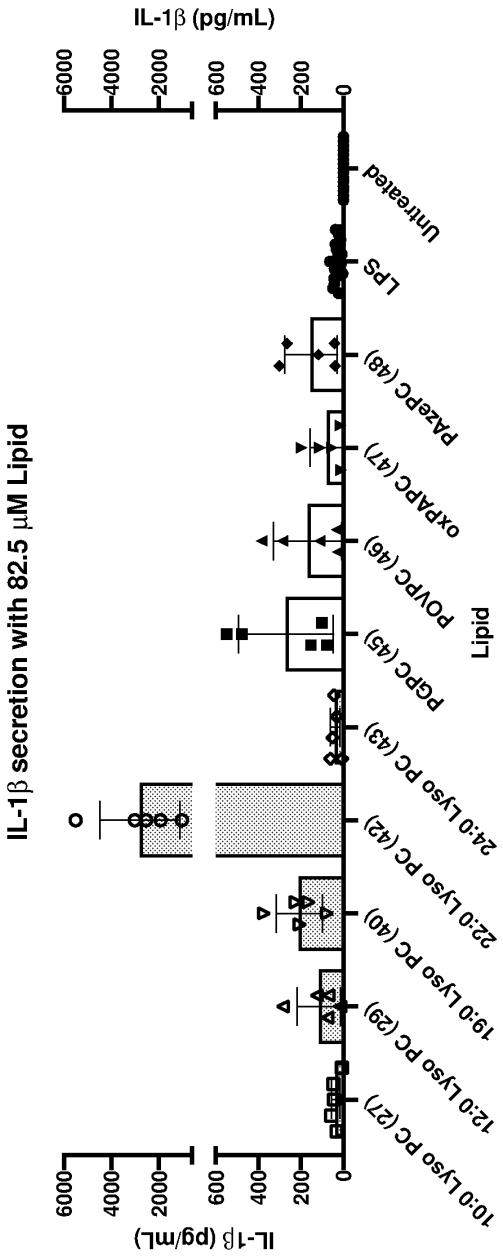

IL-1β secretion with 82.5 μM Lipid
IL-1β (pg/mL)
6000
4000
2000
600
400
200
0
Untreated
LPS
PAzePC (48)
oxPAPC (47)
POVPC (46)
PGPC (45)
24:0 Lyso PC (43)
22:0 Lyso PC (42)
19:0 Lyso PC (40)
12:0 Lyso PC (29)
10:0 Lyso PC (27)
Lipid

FIG. 3

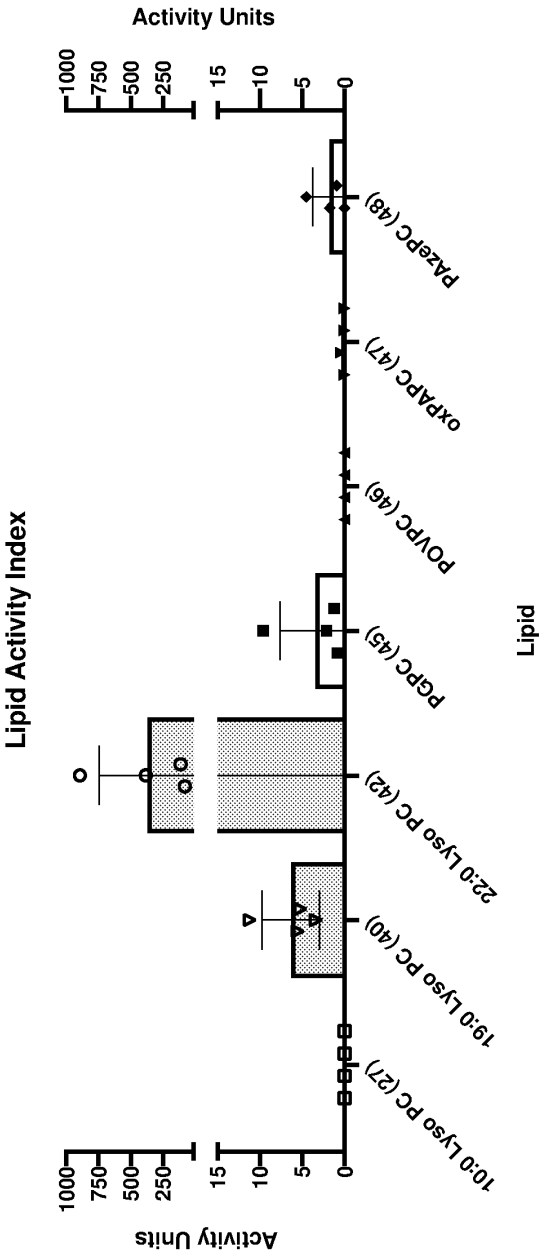

Activity Units
1000
750
500
250
15
10
5
0
PAzePC (48)
oxPAPC (47)
POVPC (46)
PGPC (45)
22:0 Lyso PC (42)
19:0 Lyso PC (40)
10:0 Lyso PC (27)
Lipid
Lipid Activity Index
Activity Units

FIG. 4

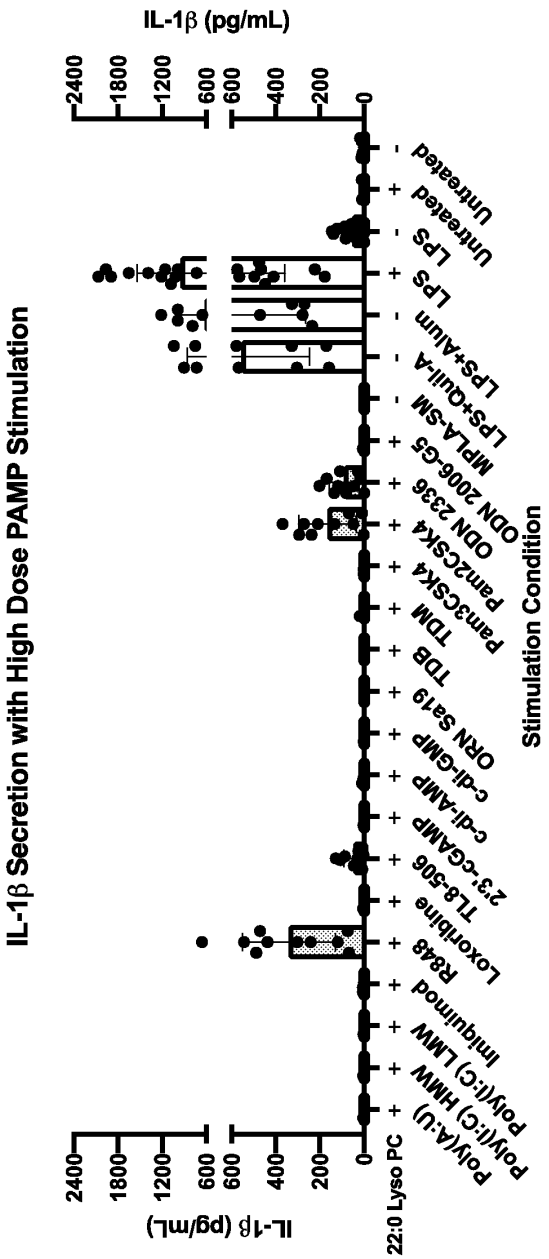

IL-1β Secretion with High Dose PAMP Stimulation
IL-1β (pg/mL)
2400
1800
1200
600
600
400
200
0
Stimulation Condition
Untreated
-
Untreated
+
LPS
-
LPS
+
LPS+Alum
-
LPS+Quil-A
-
MPLA-SM
-
ODN 2006-G5
+
ODN 2336
+
Pam2CSK4
+
Pam3CSK4
+
TDM
+
TDB
+
ORN Sa19
+
c-di-GMP
+
c-di-AMP
+
2'3'-cGAMP
+
TL8-506
+
Loxoribine
+
R848
+
Imiquimod
+
Poly(I:C) LMW
+
Poly(I:C) HMW
+
Poly(A:U)
+
22:0 Lyso PC
+

FIG. 5

FIG. 6A

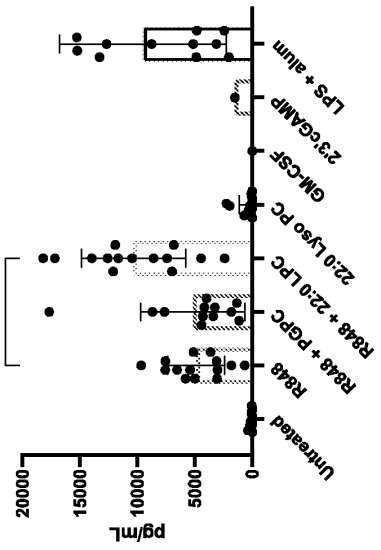


FIG. 6B

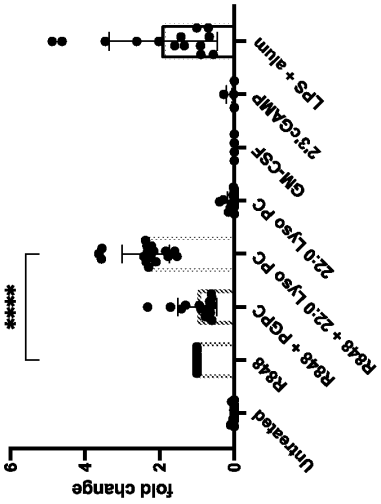


FIG. 6C

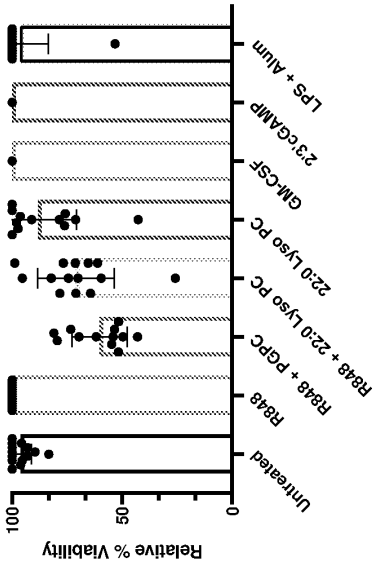


FIG. 7A

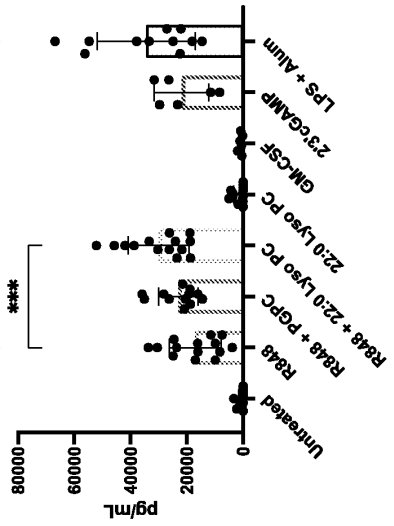


FIG. 7B

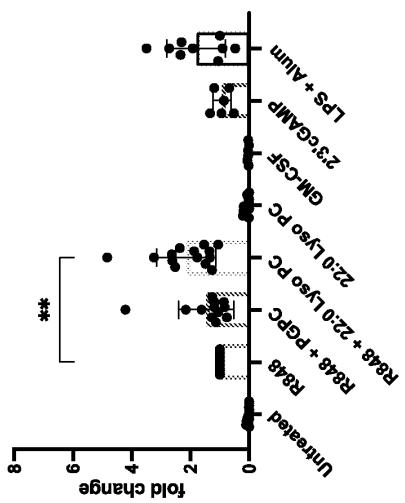


FIG. 7C

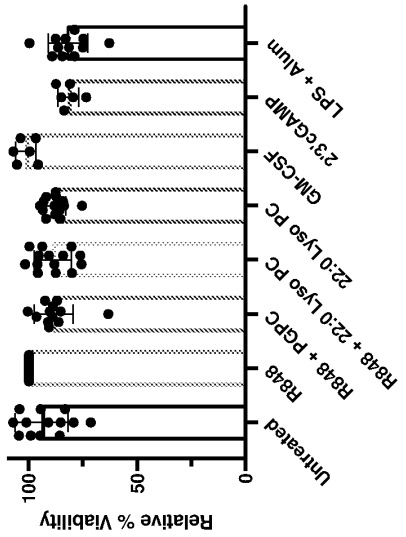


FIG. 8B

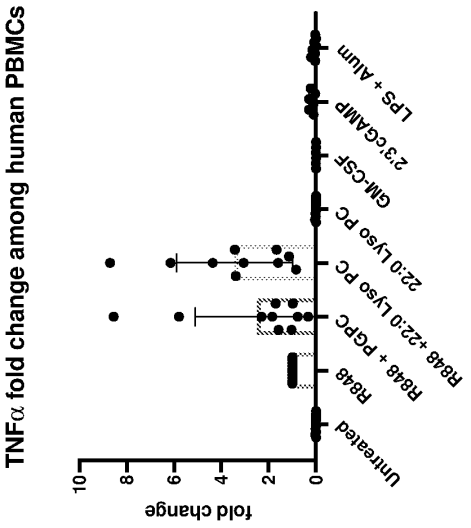

TNFα fold change among human PBMCs
fold change
0
2
4
6
8
10
Untreated
R848
R848 + PGPC
R848 +22:0 Lyso PC
22:0 Lyso PC
GM-CSF
2'3'cGAMP
LPS + Alum

FIG. 8A

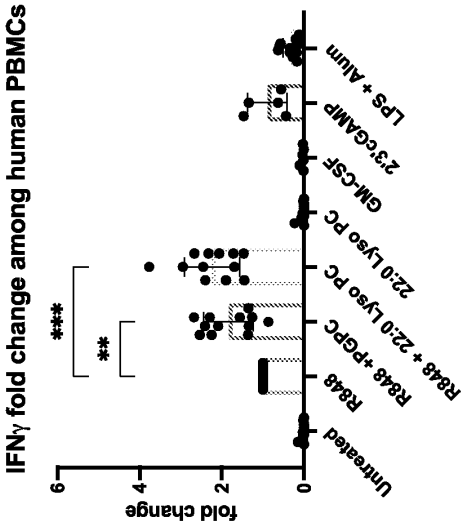

IFNγ fold change among human PBMCs
fold change
0
2
4
6
***
**
Untreated
R848
R848 +PGPC
R848 + 22:0 Lyso PC
22:0 Lyso PC
GM-CSF
2'3'cGAMP
LPS + Alum

FIG. 9A

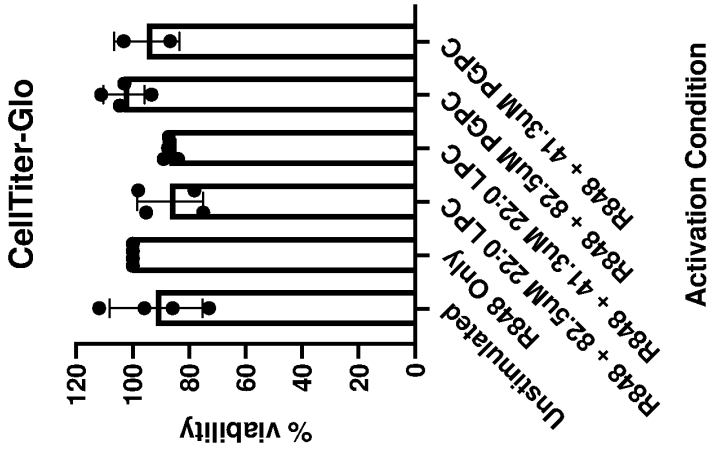

CellTiter-Glo
% viability
0
20
40
60
80
100
120
Unstimulated
R848 Only
R848 + 82.5uM 22:0 LPC
R848 + 41.3uM 22:0 LPC
R848 + 82.5uM PGPC
R848 + 41.3uM PGPC
Activation Condition

FIG. 9B

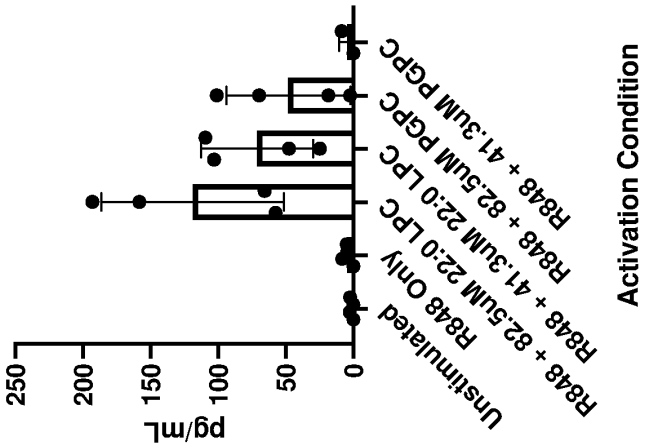

IL-1β
pg/mL
0
50
100
150
200
250
Unstimulated
R848 Only
R848 + 82.5uM 22:0 LPC
R848 + 41.3uM 22:0 LPC
R848 + 82.5uM PGPC
R848 + 41.3uM PGPC
Activation Condition

FIG. 10A

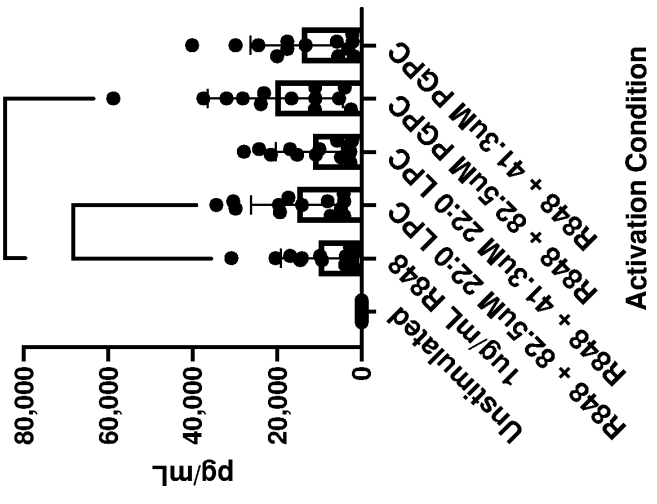


FIG. 10B

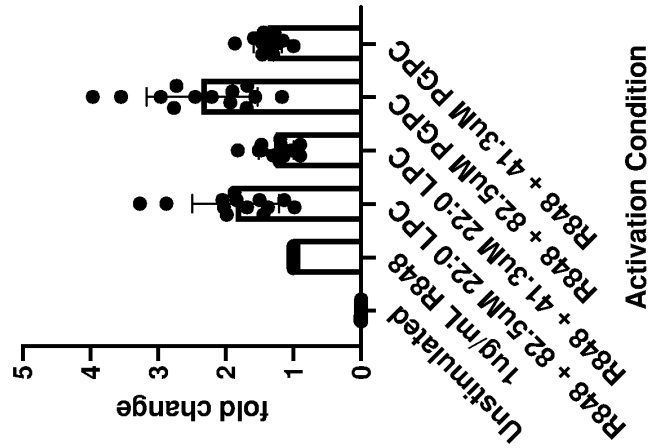


FIG. 11A

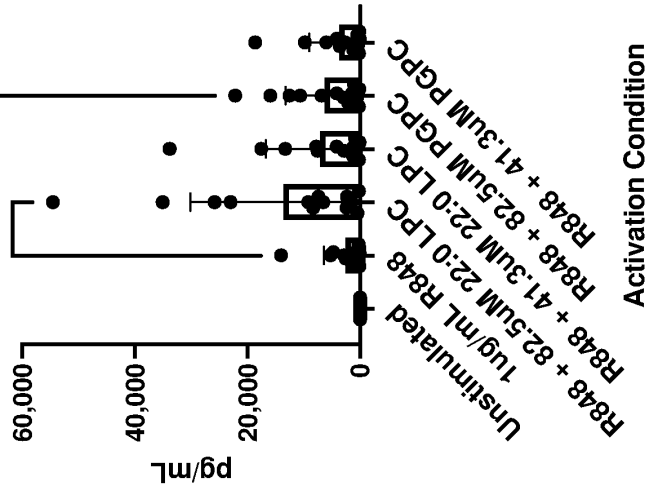


FIG. 11B

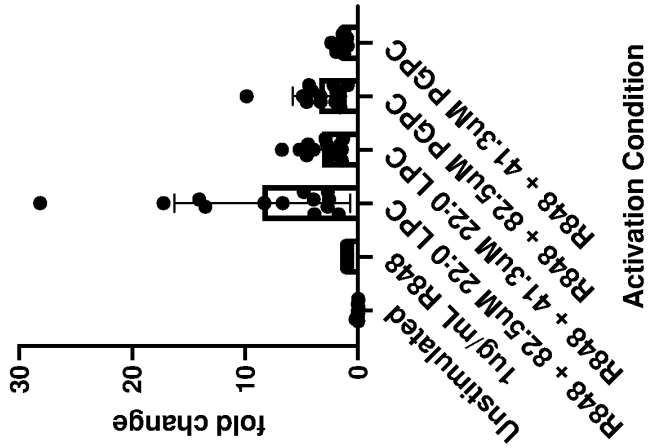


FIG. 12A

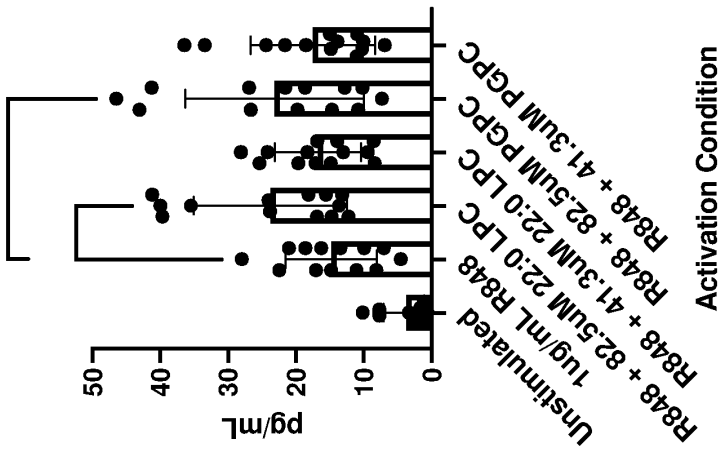


FIG. 12B

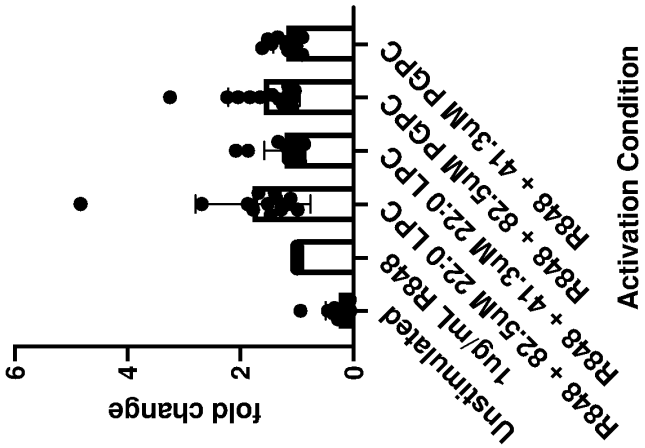


FIG. 13A

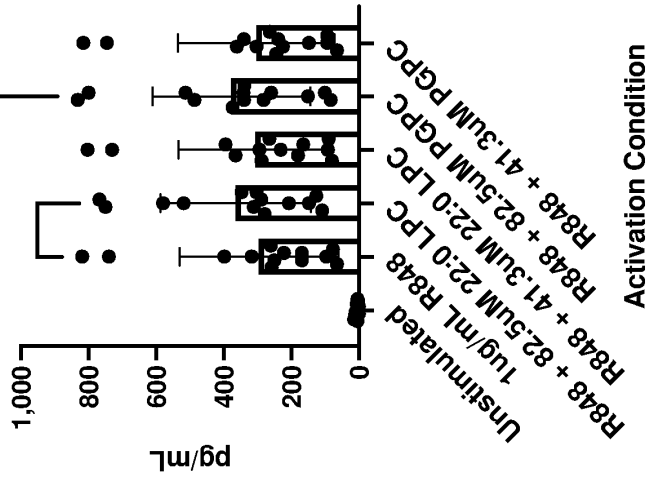


FIG. 13B

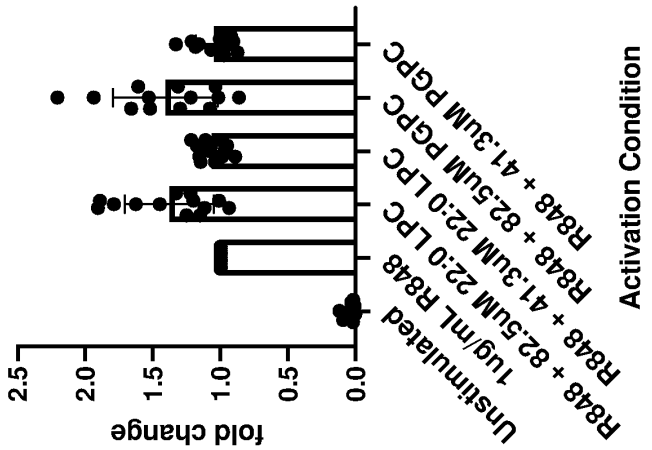


FIG. 14A

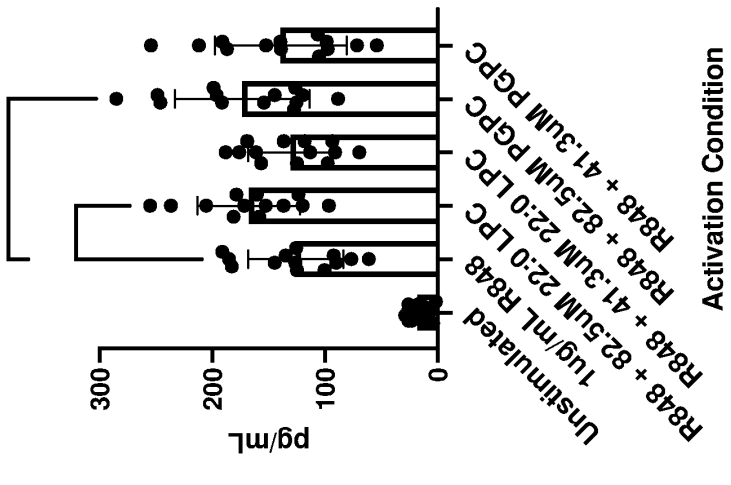


FIG. 14B

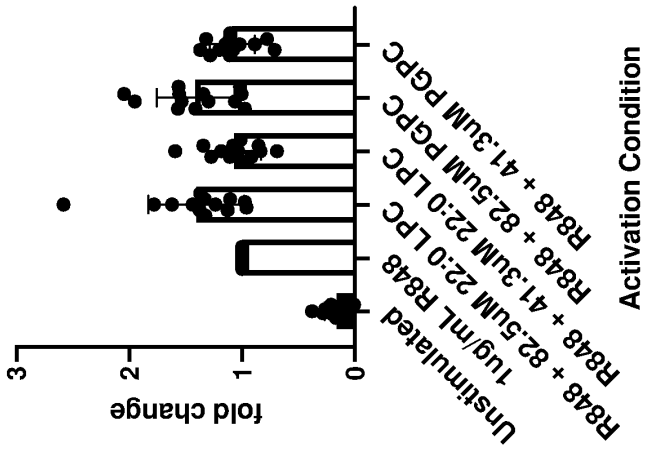


FIG. 15A

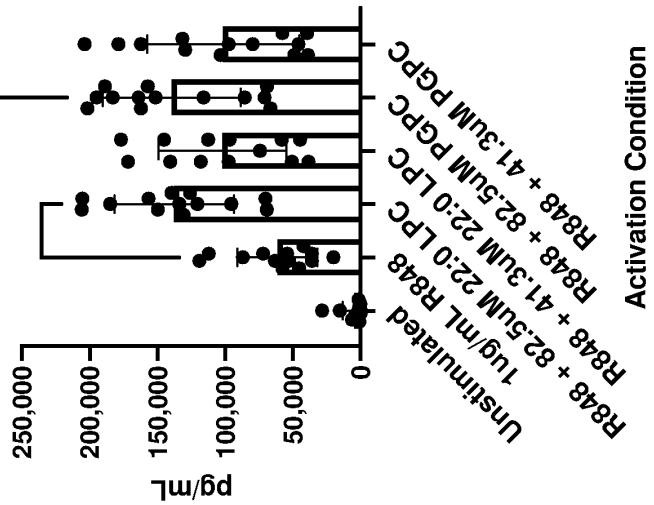


FIG. 15B

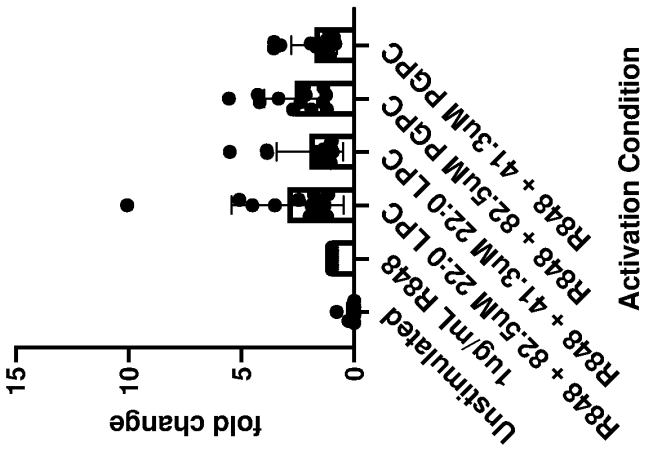


FIG. 16A

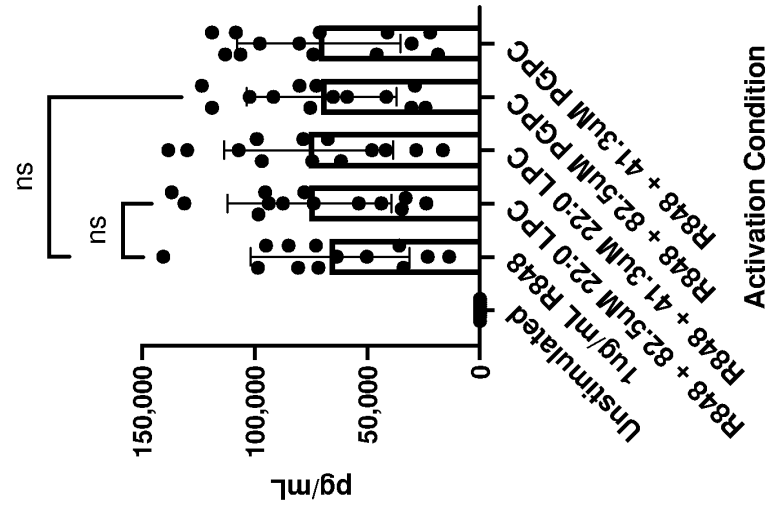
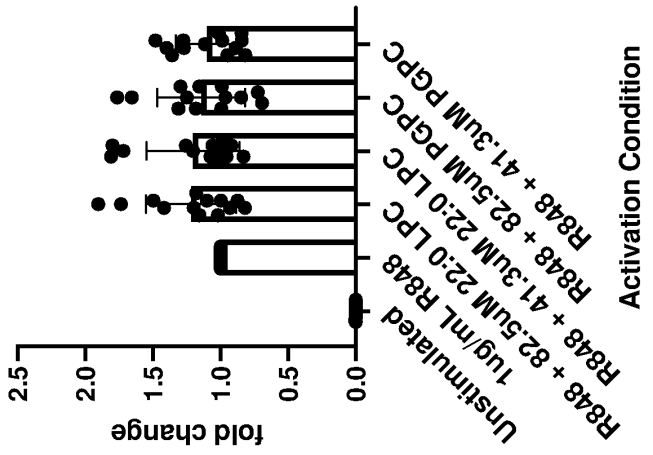


FIG. 16B



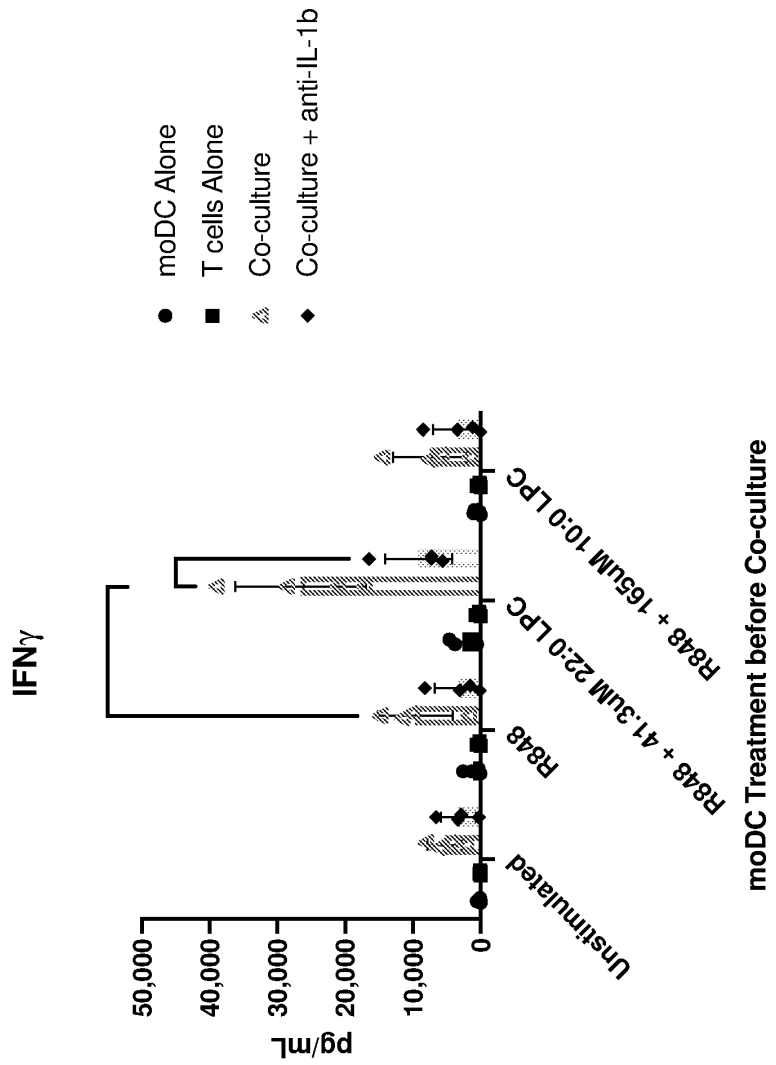

IFNγ
moDC Alone
T cells Alone
Co-culture
Co-culture + anti-IL-1b
pg/mL
50,000
40,000
30,000
20,000
10,000
0
Unstimulated
R848
R848 + 41.3uM 22:0 LPC
R848 + 165uM 10:0 LPC
moDC Treatment before Co-culture

FIG. 17

FIG. 18A

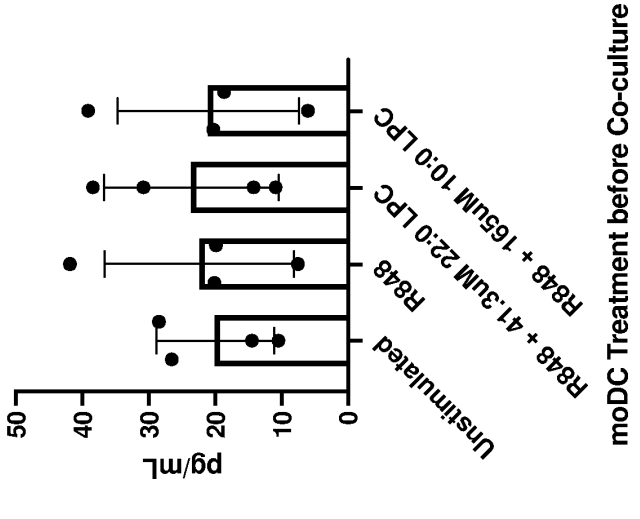
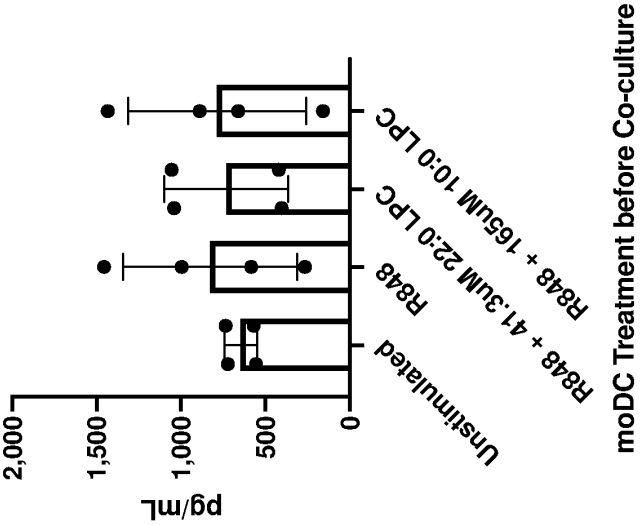


FIG. 18B



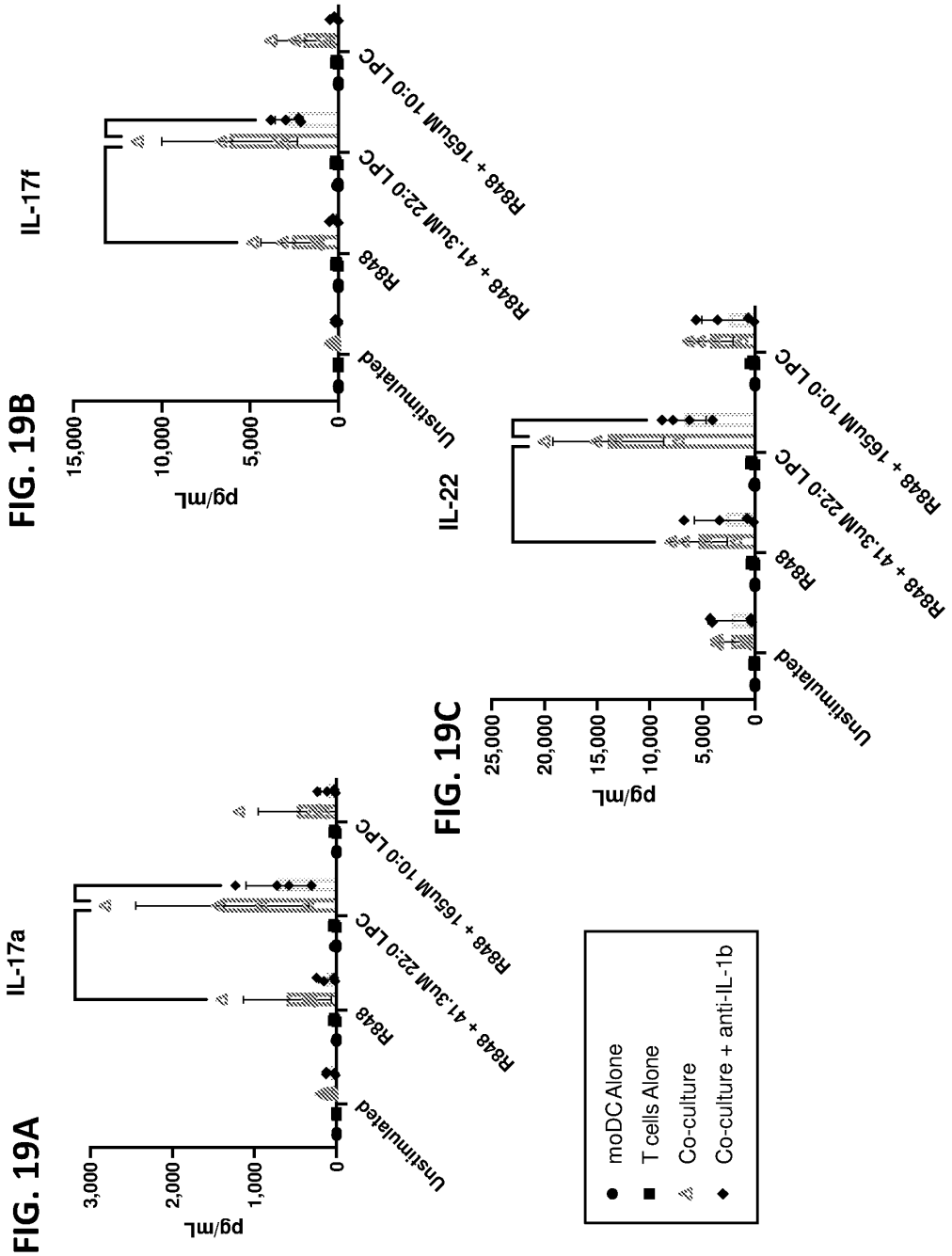
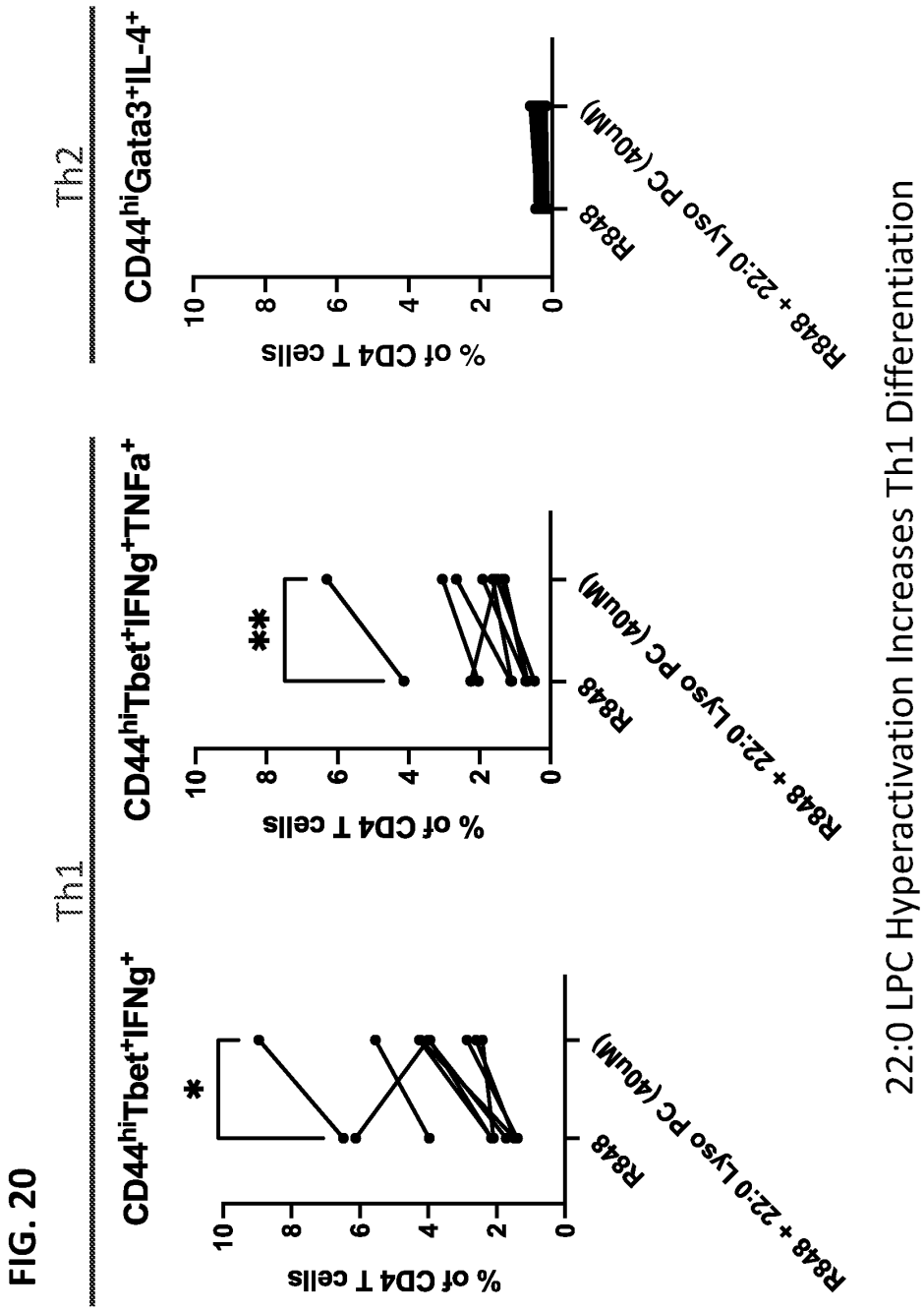


FIG. 19A

FIG. 19B

FIG. 19C

FIG. 20


Th1
Th2
CD44hiTbet+IFNg+
CD44hiTbet+IFNg+TNFa+
CD44hiGata3+IL-4+
% of CD4 T cells
R848
R848 + 22:0 Lyso PC (40uM)
*
**
22:0 LPC Hyperactivation Increases Th1 Differentiation

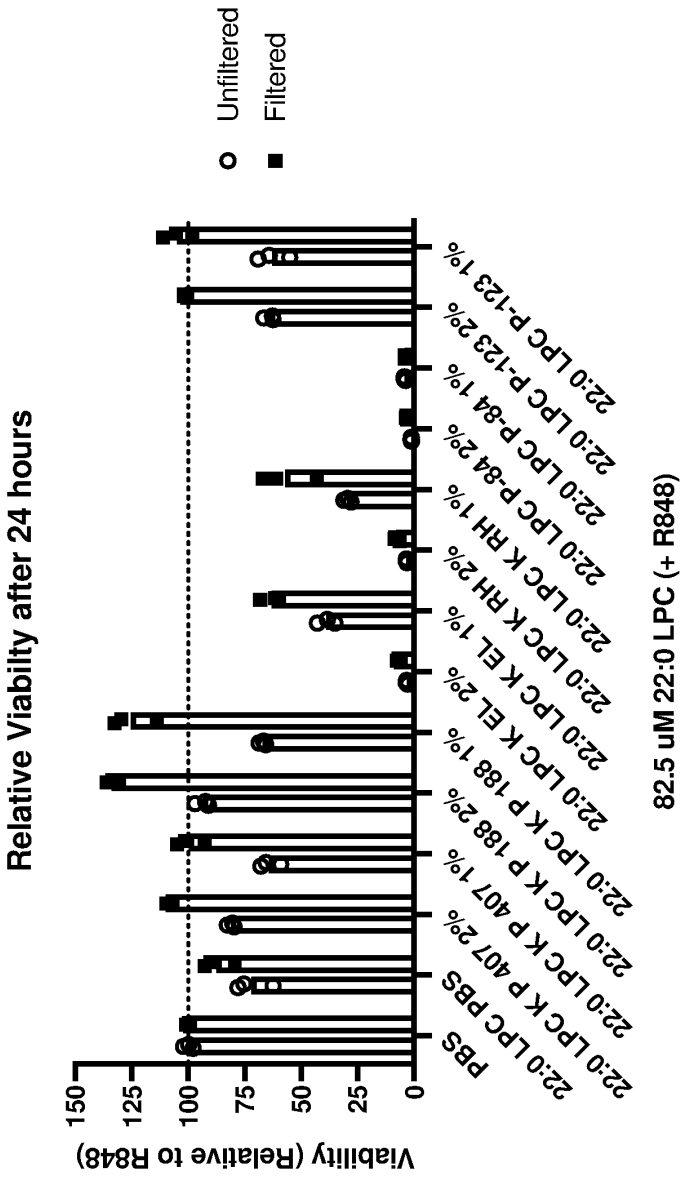

Relative Viability after 24 hours
Unfiltered
Filtered
Viability (Relative to R848)
150
125
100
75
50
25
0
PBS
22:0 LPC PBS
22:0 LPC K P 407 2%
22:0 LPC K P 407 1%
22:0 LPC K P 188 2%
22:0 LPC K P 188 1%
22:0 LPC K EL 2%
22:0 LPC K EL 1%
22:0 LPC K RH 2%
22:0 LPC K RH 1%
22:0 LPC P-84 2%
22:0 LPC P-84 1%
22:0 LPC P-123 2%
22:0 LPC P-123 1%
82.5 uM 22:0 LPC (+ R848)

FIG. 21

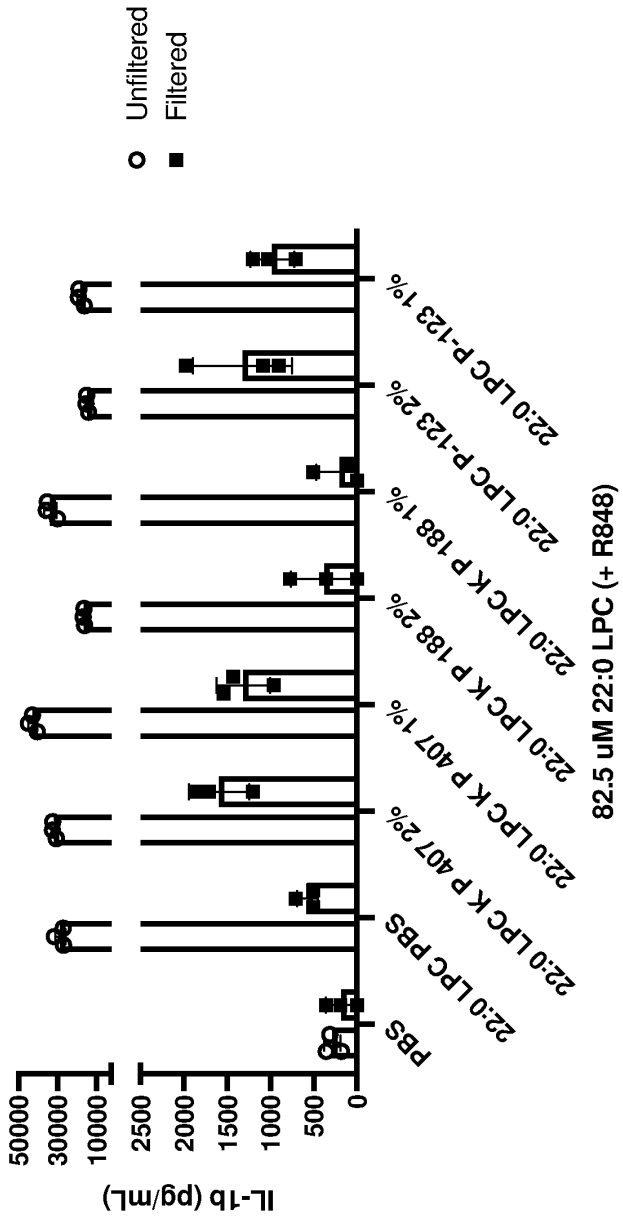

Unfiltered
Filtered
IL-1b secretion after 24h
IL-1b (pg/mL)
50000
30000
10000
2500
2000
1500
1000
500
0
PBS
22:0 LPC PBS
22:0 LPC K P 407 2%
22:0 LPC K P 407 1%
22:0 LPC K P 188 2%
22:0 LPC K P 188 1%
22:0 LPC P-123 2%
22:0 LPC P-123 1%
82.5 uM 22:0 LPC (+ R848)

FIG. 22

FIG. 23A

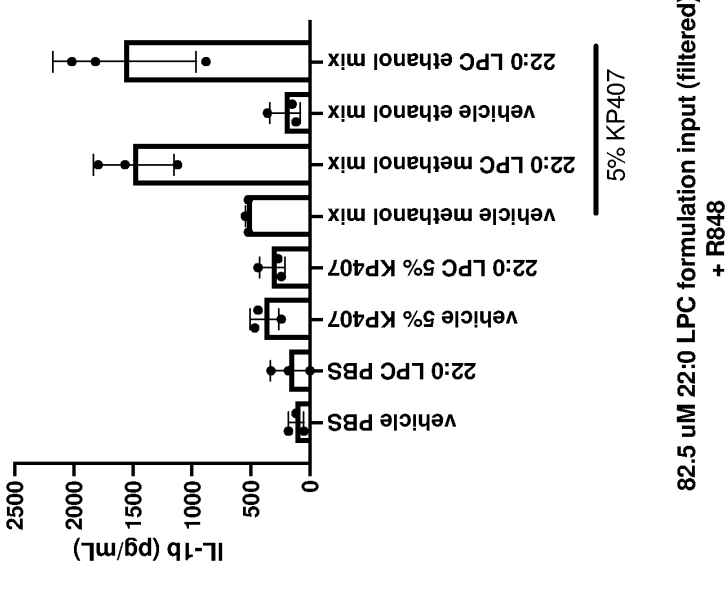
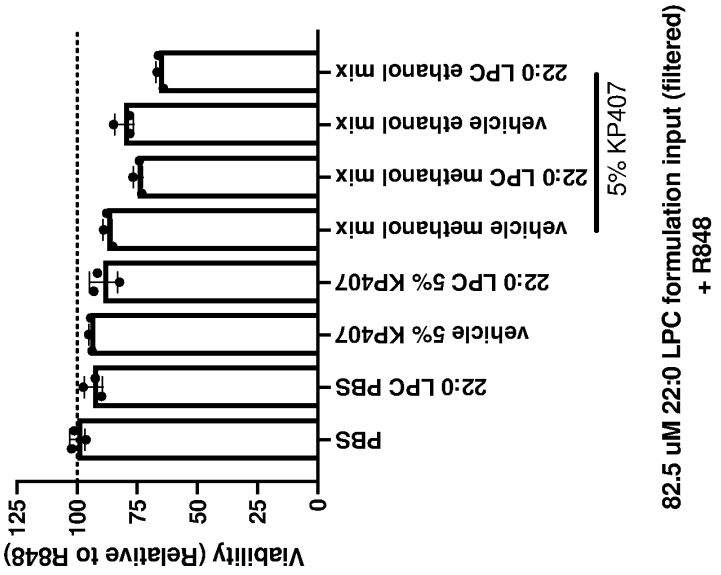


FIG. 23B



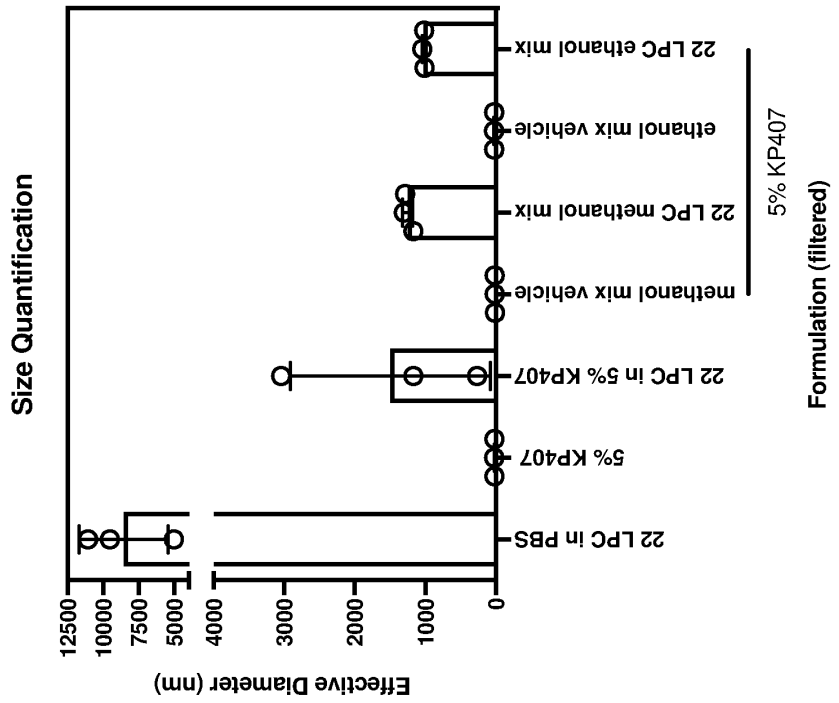

Size Quantification
Effective Diameter (nm)
12500
10000
7500
5000
4000
3000
2000
1000
0
22 LPC in PBS
5% KP407
22 LPC in 5% KP407
methanol mix vehicle
22 LPC methanol mix
ethanol mix vehicle
22 LPC ethanol mix
5% KP407
Formulation (filtered)

FIG. 24

FIG. 25A

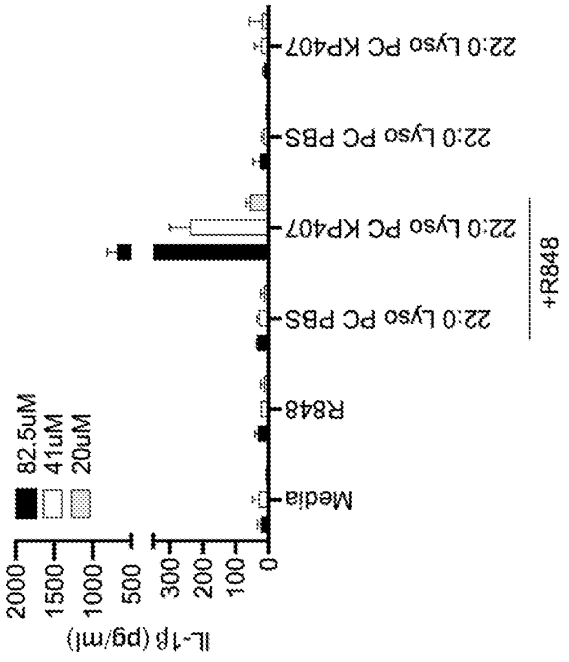


FIG. 25B

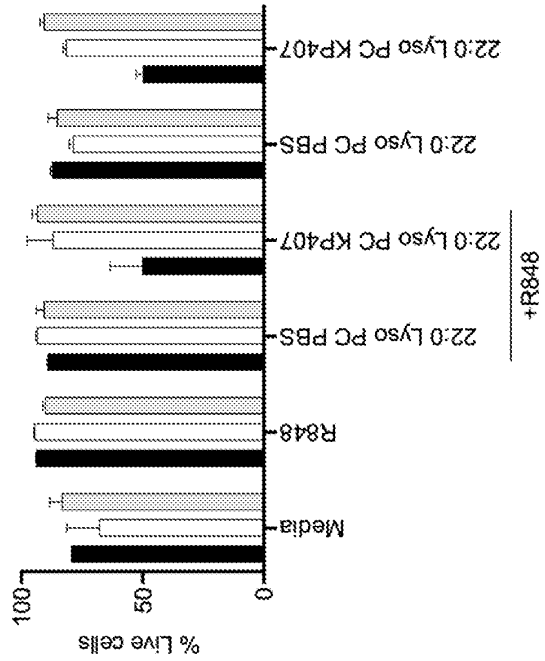


FIG. 26A

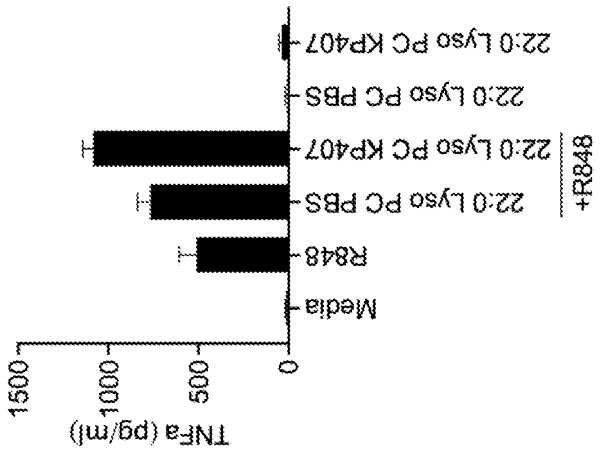


FIG. 26B

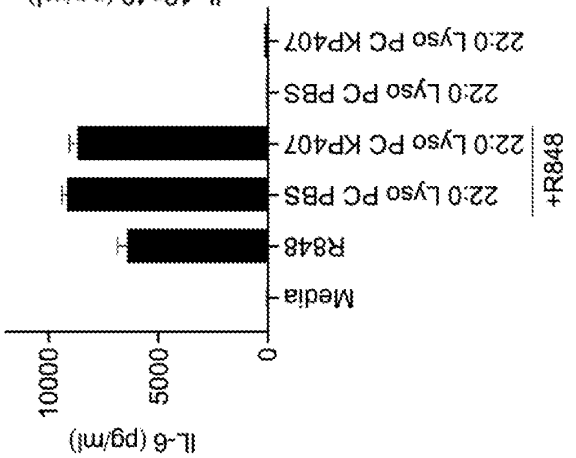
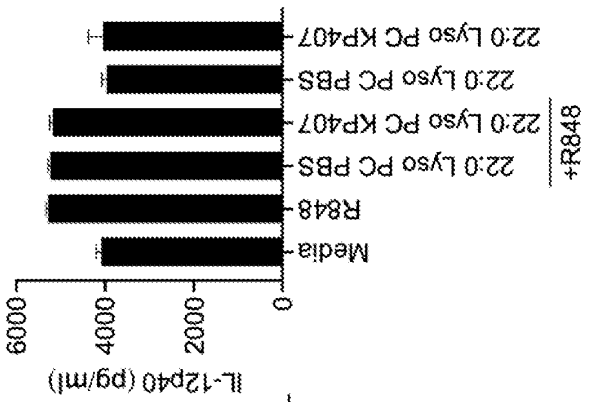


FIG. 26C



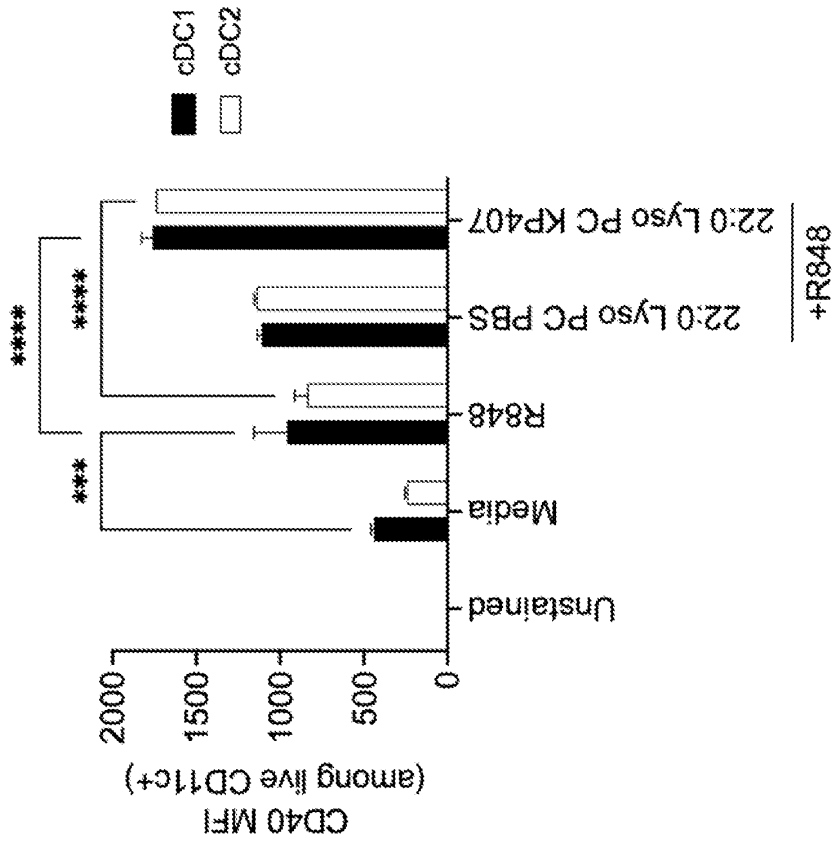

cDC1
cDC2
CD40 MFI
(among live CD11c+)
2000
1500
1000
500
0
Unstained
Media
R848
22:0 Lyso PC PBS
22:0 Lyso PC KP407
+R848
***
****
****

FIG. 27

FIG. 28A

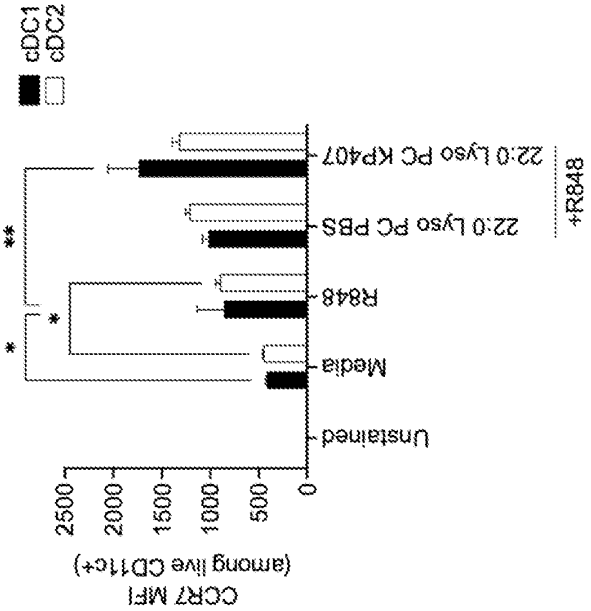
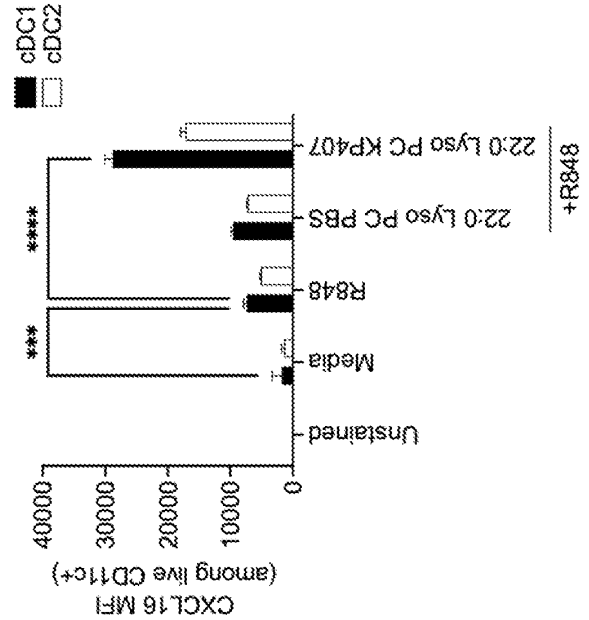


FIG. 28B



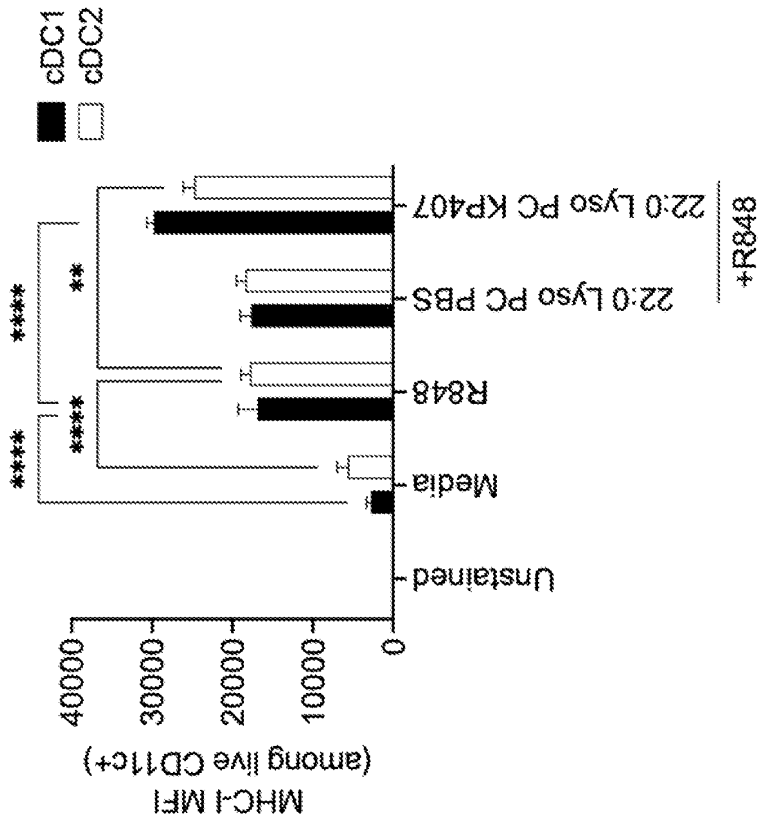

cDC1
cDC2
MHC-I MFI
(among live CD11c+)
40000
30000
20000
10000
0
Unstained
Media
R848
22:0 Lyso PC PBS
22:0 Lyso PC KP407
+R848
****
**
****
****

FIG. 29

FIG. 30A

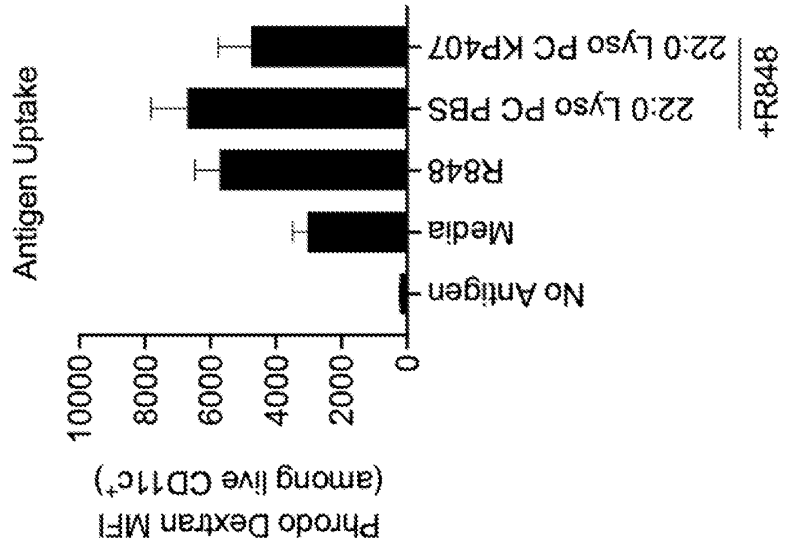
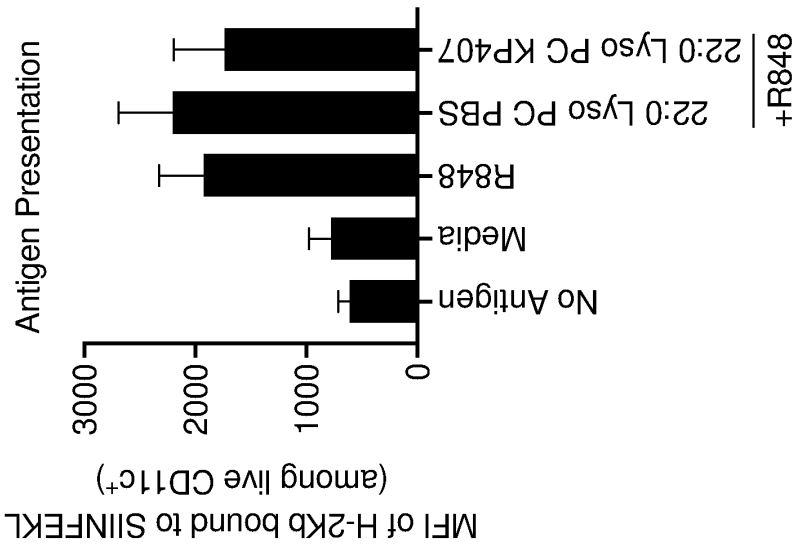


FIG. 30B



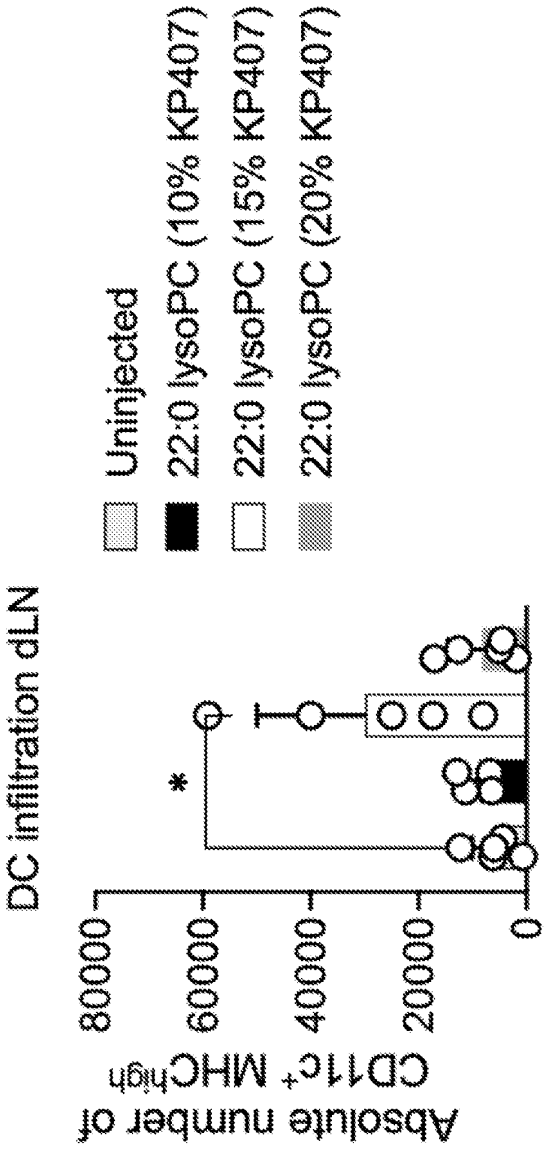

DC infiltration dLN
Uninjected
22:0 lysoPC (10% KP407)
22:0 lysoPC (15% KP407)
22:0 lysoPC (20% KP407)
Absolute number of
CD11c+ MChigh
80000
60000
40000
20000
0
*

FIG. 31

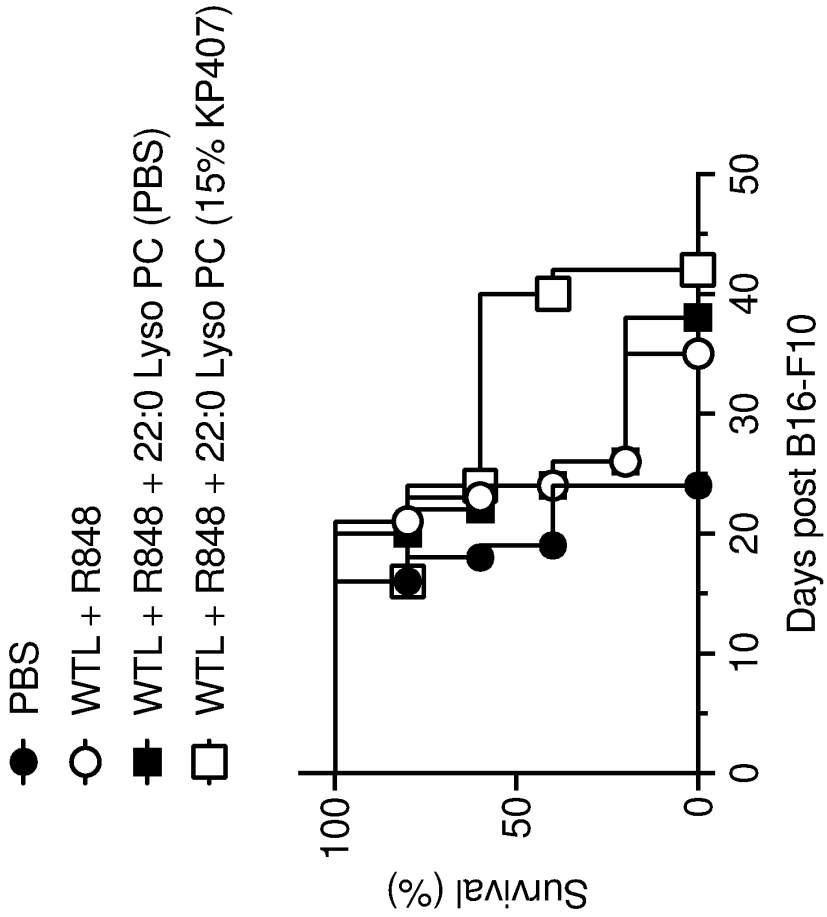

PBS
WTL + R848
WTL + R848 + 22:0 Lyso PC (PBS)
WTL + R848 + 22:0 Lyso PC (15% KP407)
Survival (%)
100
50
0
0
10
20
30
40
50
Days post B16-F10

FIG. 32

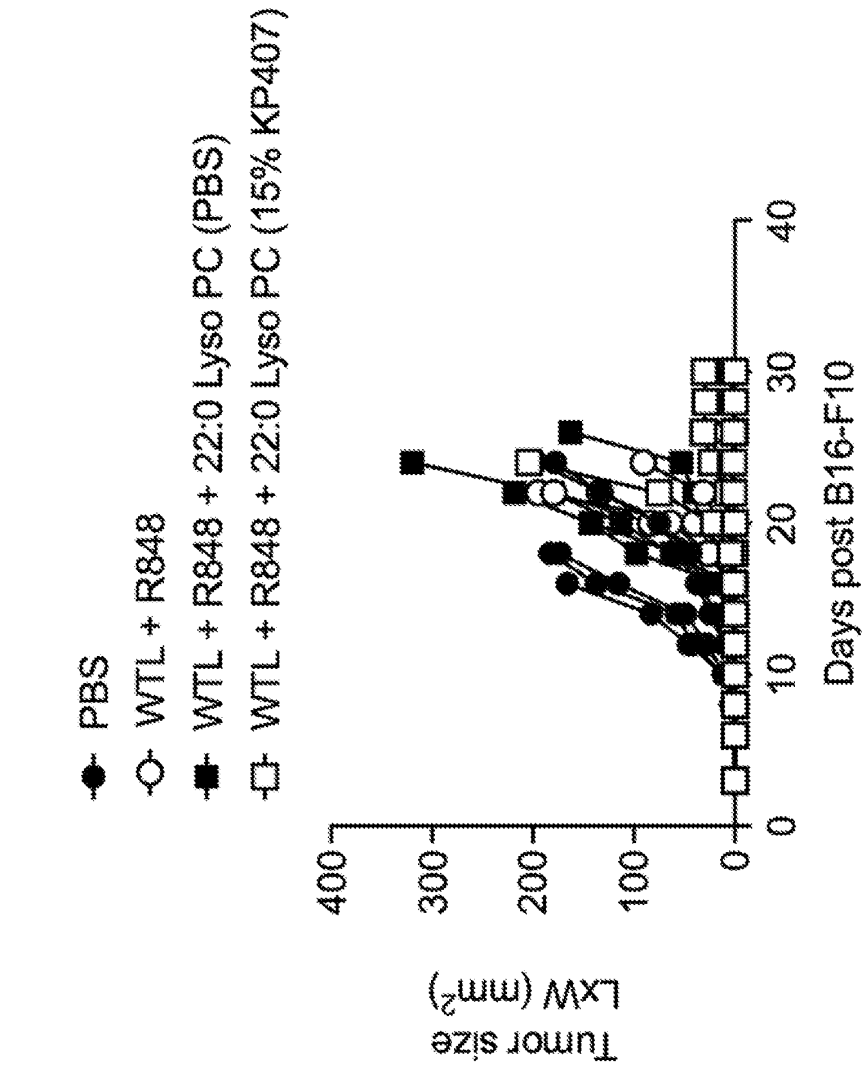

PBS
WTL + R848
WTL + R848 + 22:0 Lyso PC (PBS)
WTL + R848 + 22:0 Lyso PC (15% KP407)
Tumor size
LxW (mm²)
400
300
200
100
0
0
10
20
30
40
Days post B16-F10

FIG. 33