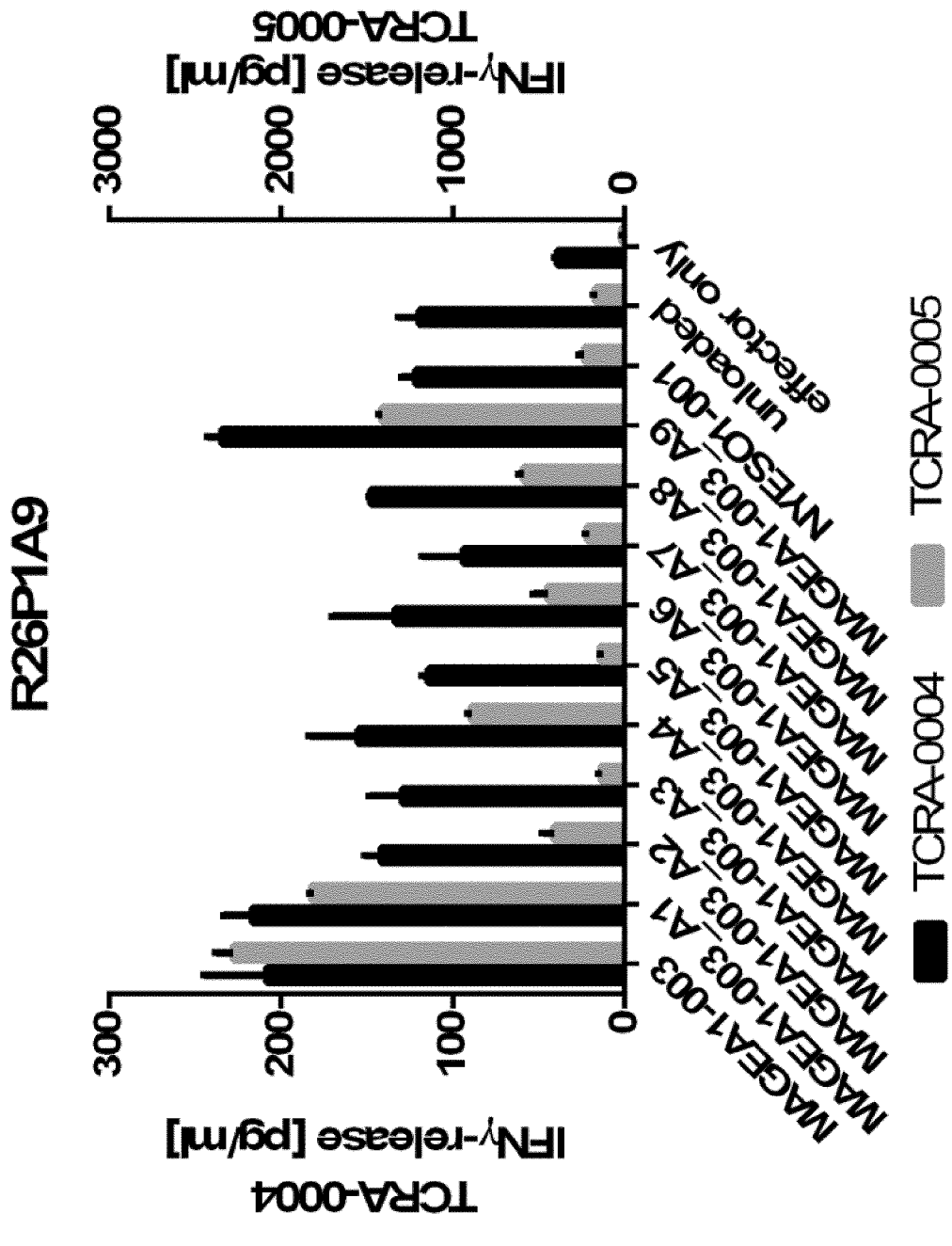

R26P1A9
TCRA-0004
IFNγ-release [pg/ml]
300
200
100
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
MAGEA1-003_A9
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 1:

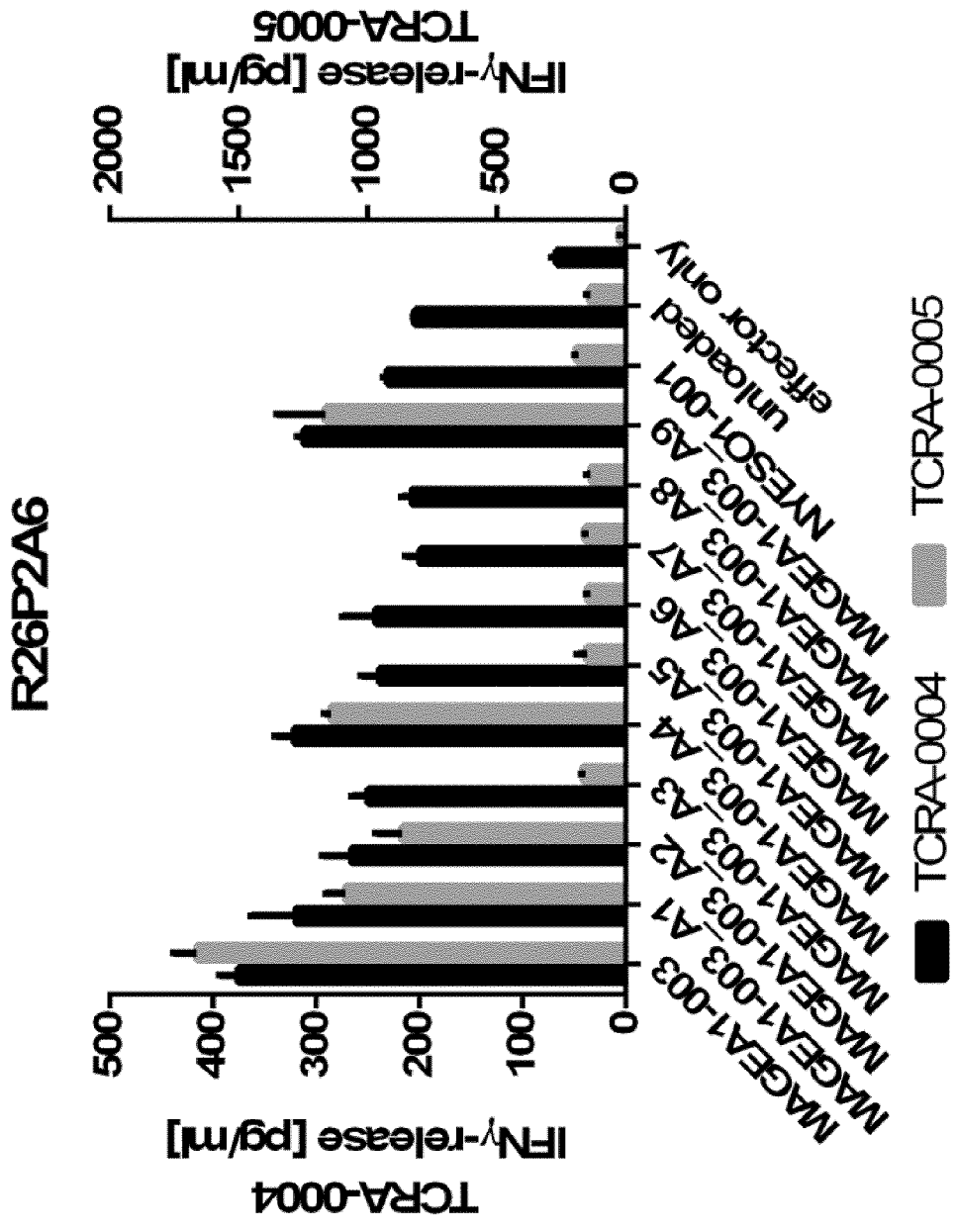


Figure 2:

Figure 3:

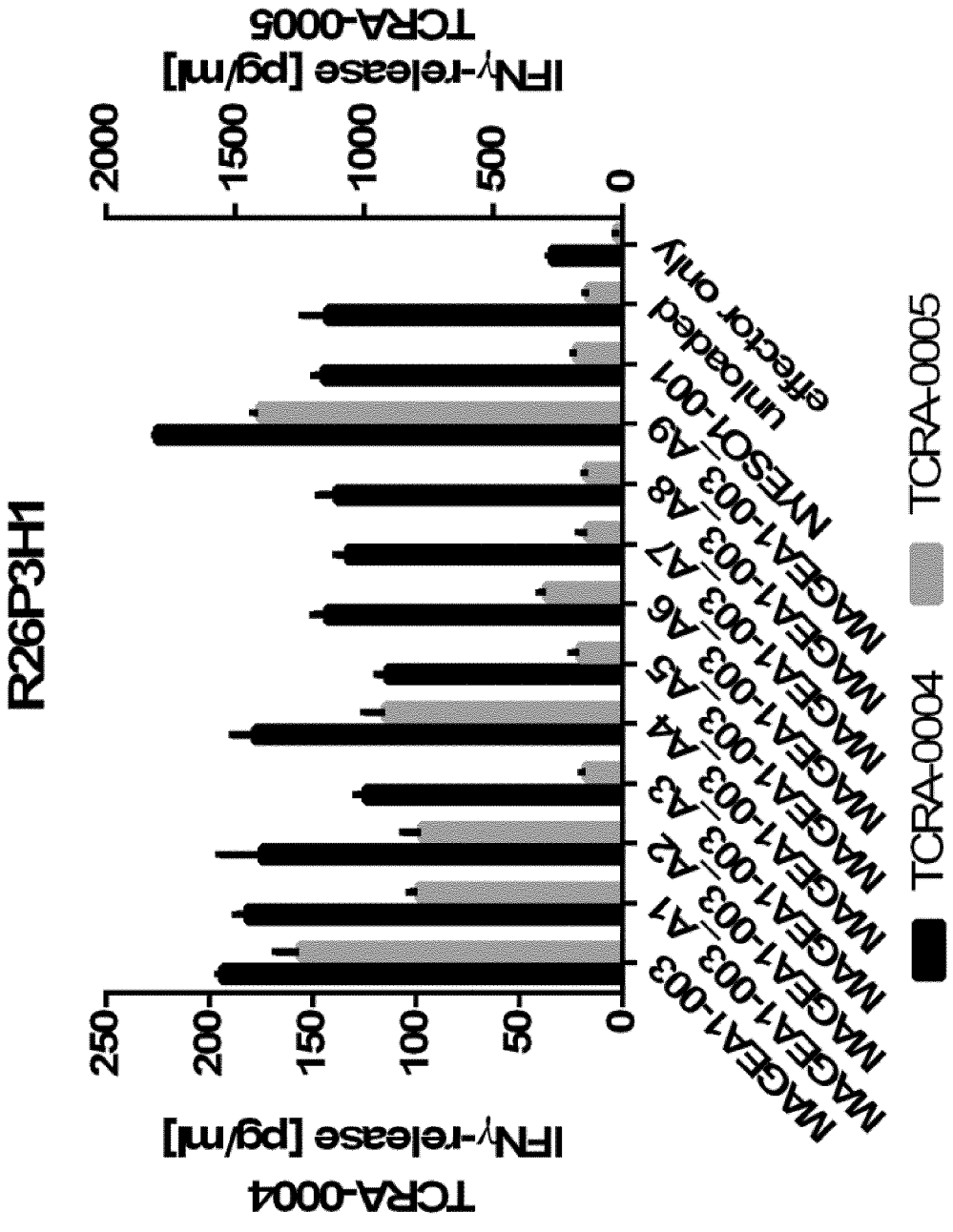

R26P3H1
TCRA-0004
IFNγ-release [pg/ml]
250
200
150
100
50
0
TCRA-0005
IFNγ-release [pg/ml]
2000
1500
1000
500
0
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
MAGEA1-003_A9
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 3

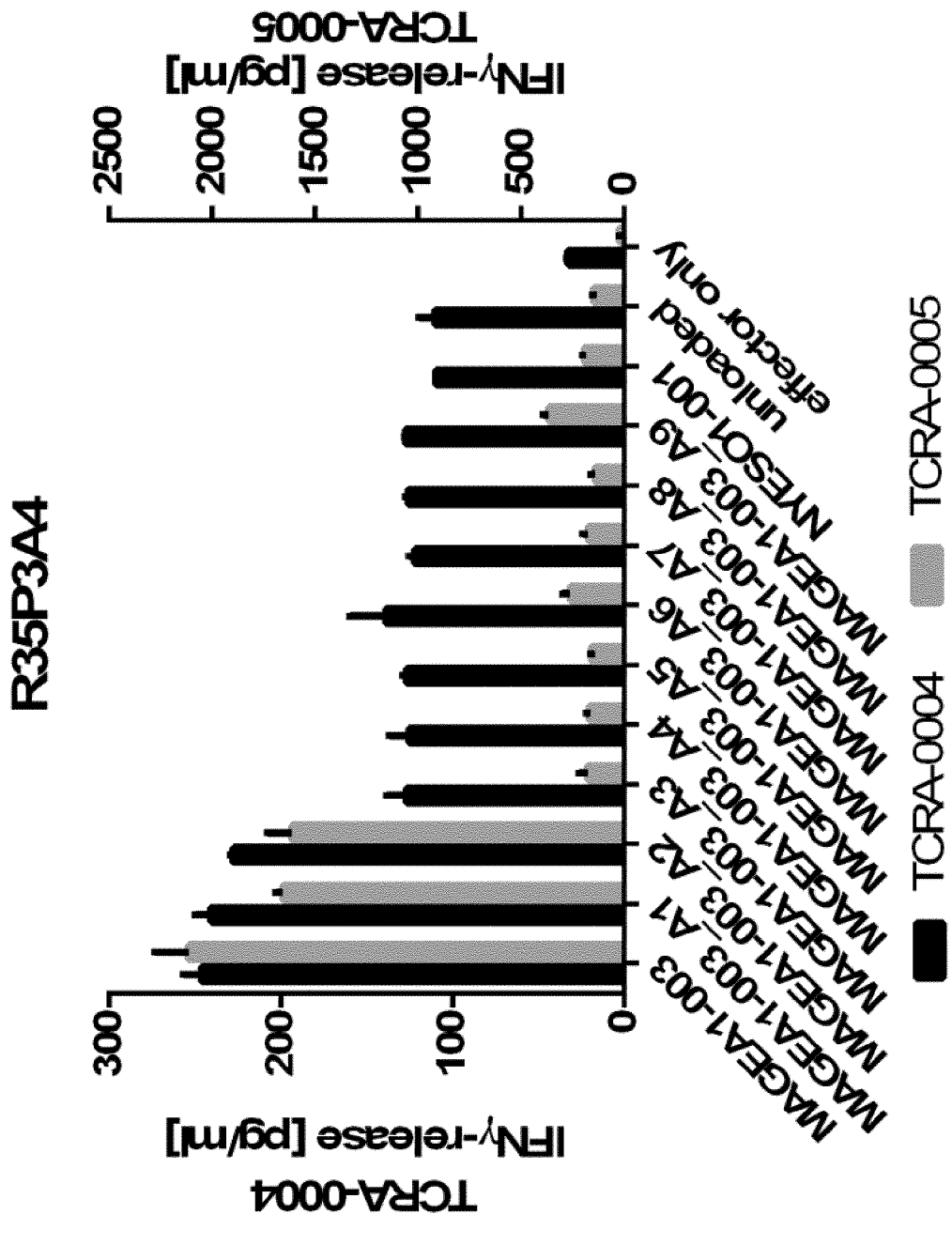

R35P3A4
TCRA-0004
IFNγ-release [pg/ml]
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200
100
0
TCRA-0005
IFNγ-release [pg/ml]
2500
2000
1500
1000
500
0
MAGEA1-003 A7
MAGEA1-003 A2
MAGEA1-003 A3
MAGEA1-003 A4
MAGEA1-003 A5
MAGEA1-003 A6
MAGEA1-003 A7
MAGEA1-003 A8
MAGEA1-003 A9
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 4:

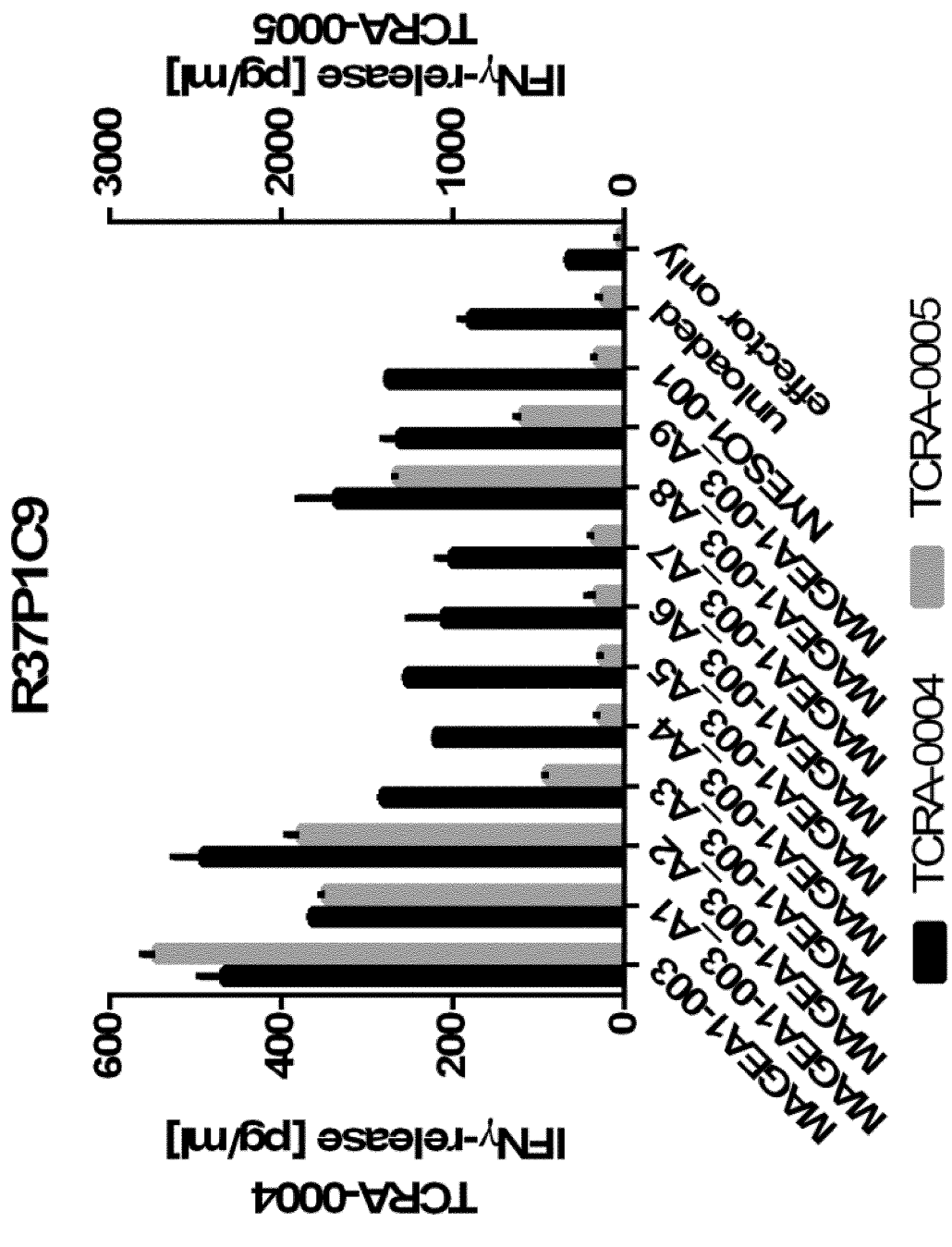

R37P1C9
TCRA-0004
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
MAGEA1-003_A9
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 5:

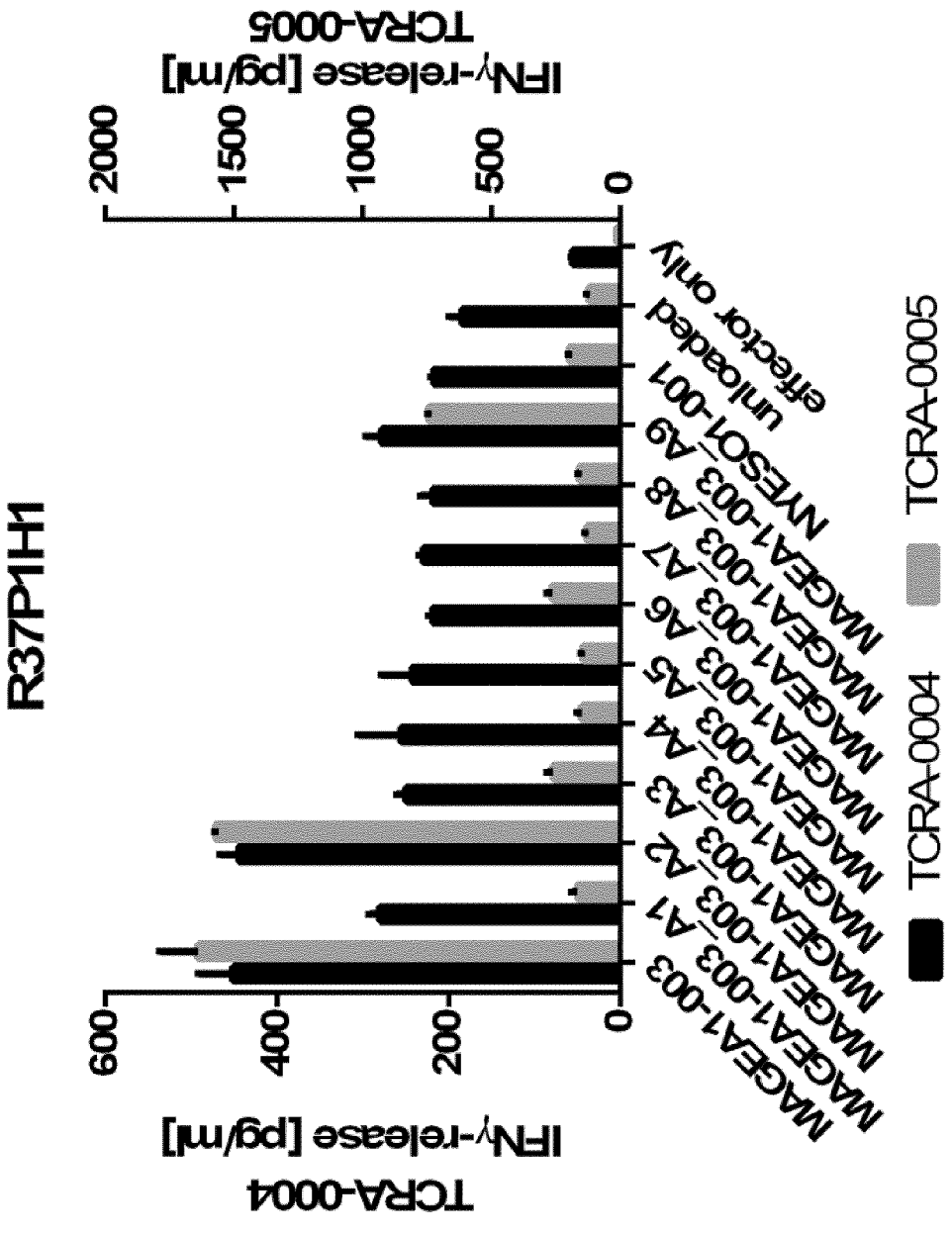

R37P1H1
TCRA-0004
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
2000
1500
1000
500
0
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
NYESO1-001_A9
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 6:

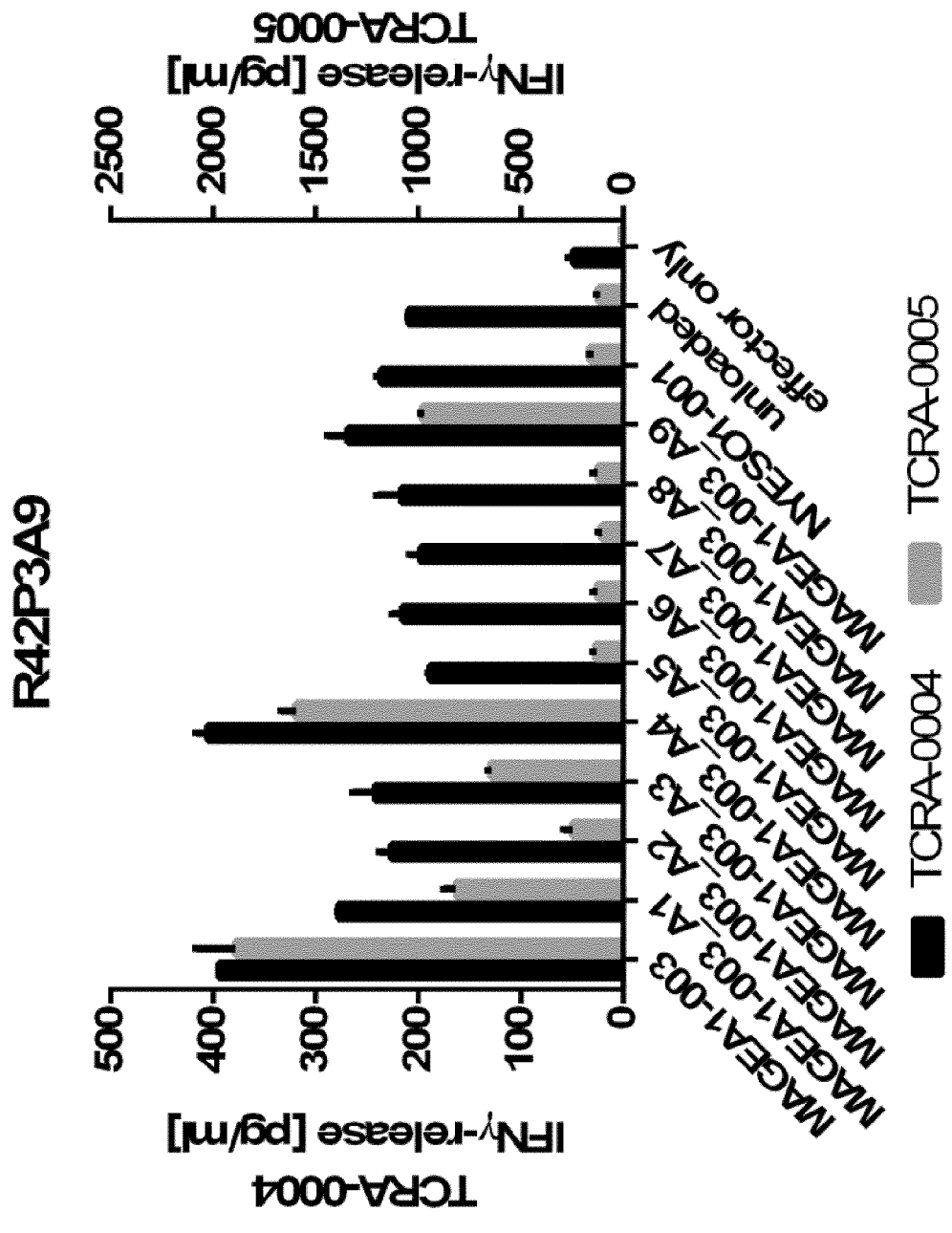

R42P3A9
TCRA-0004
IFNγ-release [pg/ml]
0
100
200
300
400
500
TCRA-0005
IFNγ-release [pg/ml]
0
500
1000
1500
2000
2500
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
NYESO1-A9
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 7:

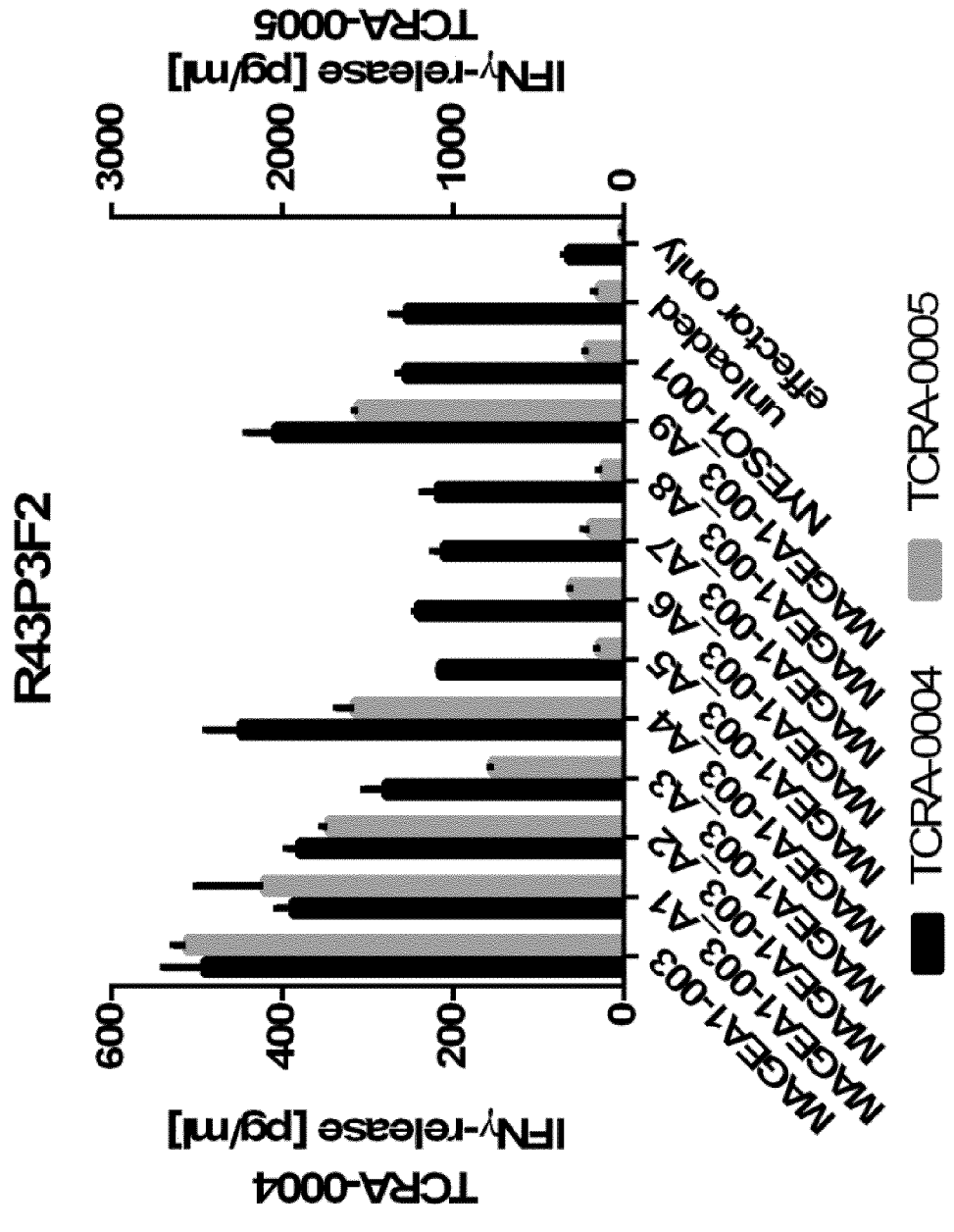

R43P3F2
TCRA-0004
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
TCRA-0004
TCRA-0005
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
NYESO1-001_A9
unloaded
effector only

Figure 8:

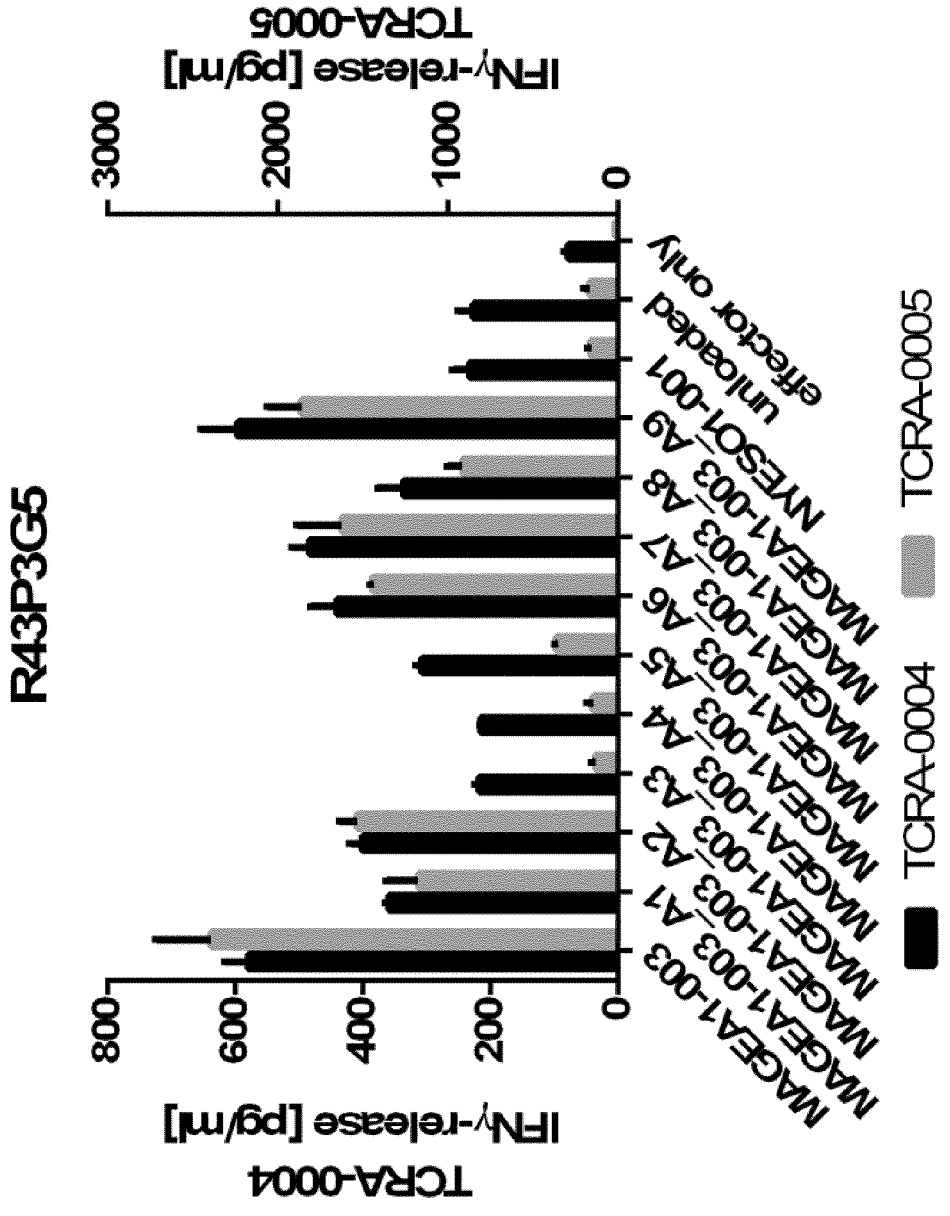

R43P3G5
TCRA-0004
IFNγ-release [pg/ml]
800
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
MYESO1-001_A9
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 9:

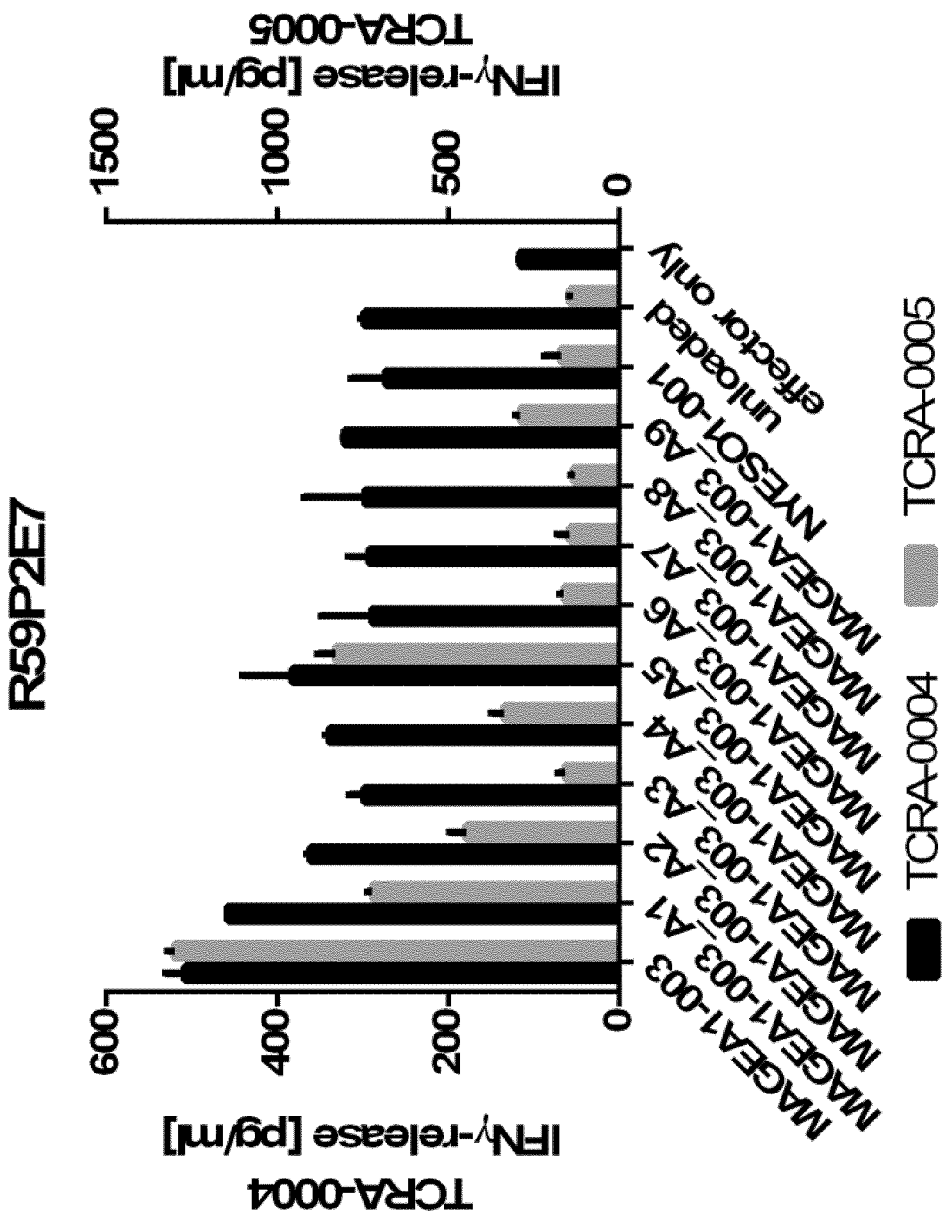

R59P2E7
TCRA-0004
IFNγ-release [pg/ml]
0
200
400
600
TCRA-0005
IFNγ-release [pg/ml]
0
500
1000
1500
TCRA-0004
TCRA-0005
MAGEA1-003
MAGEA1-003_A1
MAGEA1-003_A2
MAGEA1-003_A3
MAGEA1-003_A4
MAGEA1-003_A5
MAGEA1-003_A6
MAGEA1-003_A7
MAGEA1-003_A8
NYESO1-001_A9
unloaded
effector only

Figure 10:

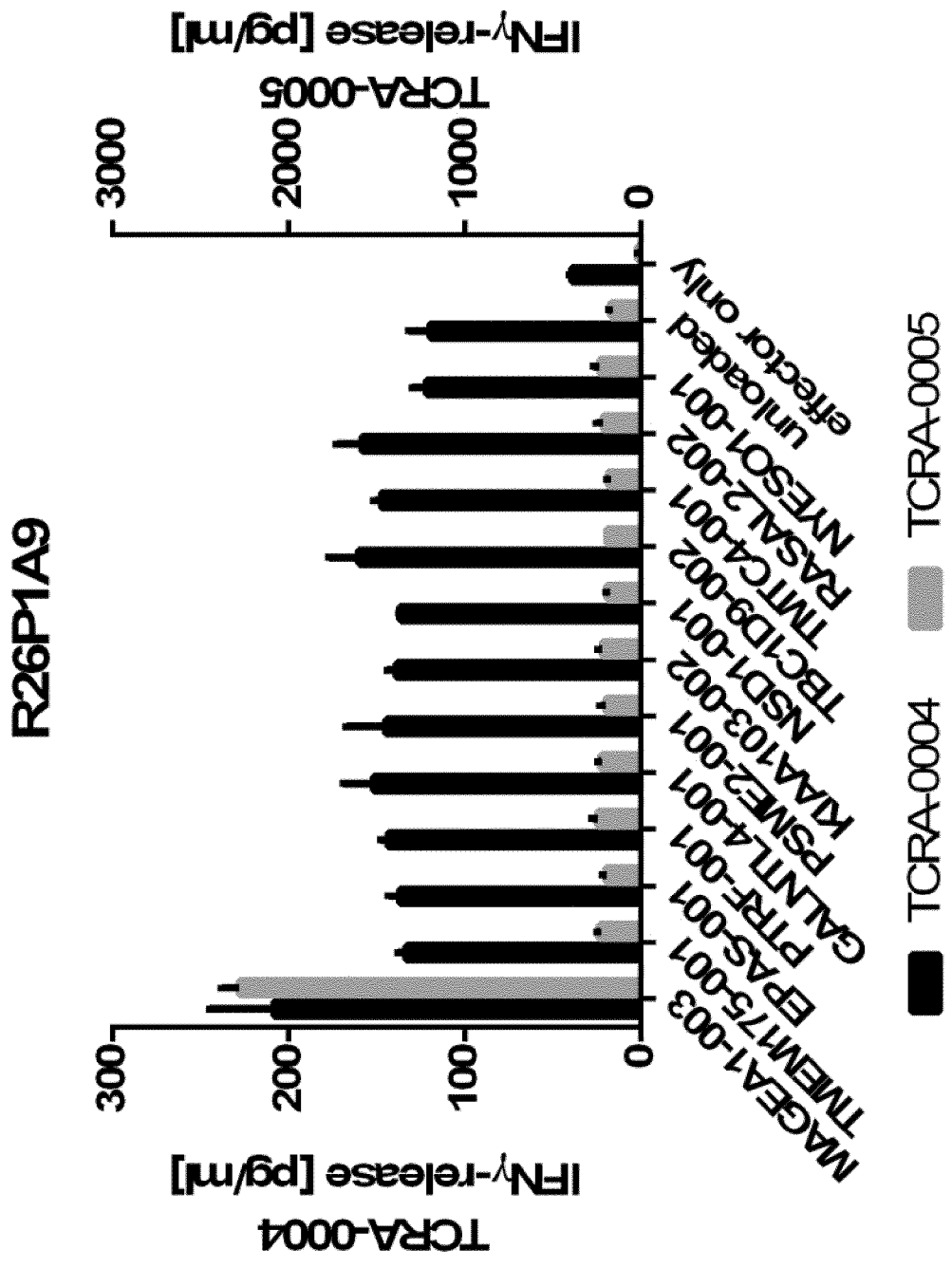

R26P1A9
TCRA-0004
IFNγ-release [pg/ml]
300
200
100
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
GALNTL4-001
PSME2-001
KIAA1033-002
NSD1-001
TBC1D9-002
TMTC4-001
RASAL2-002
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 11:

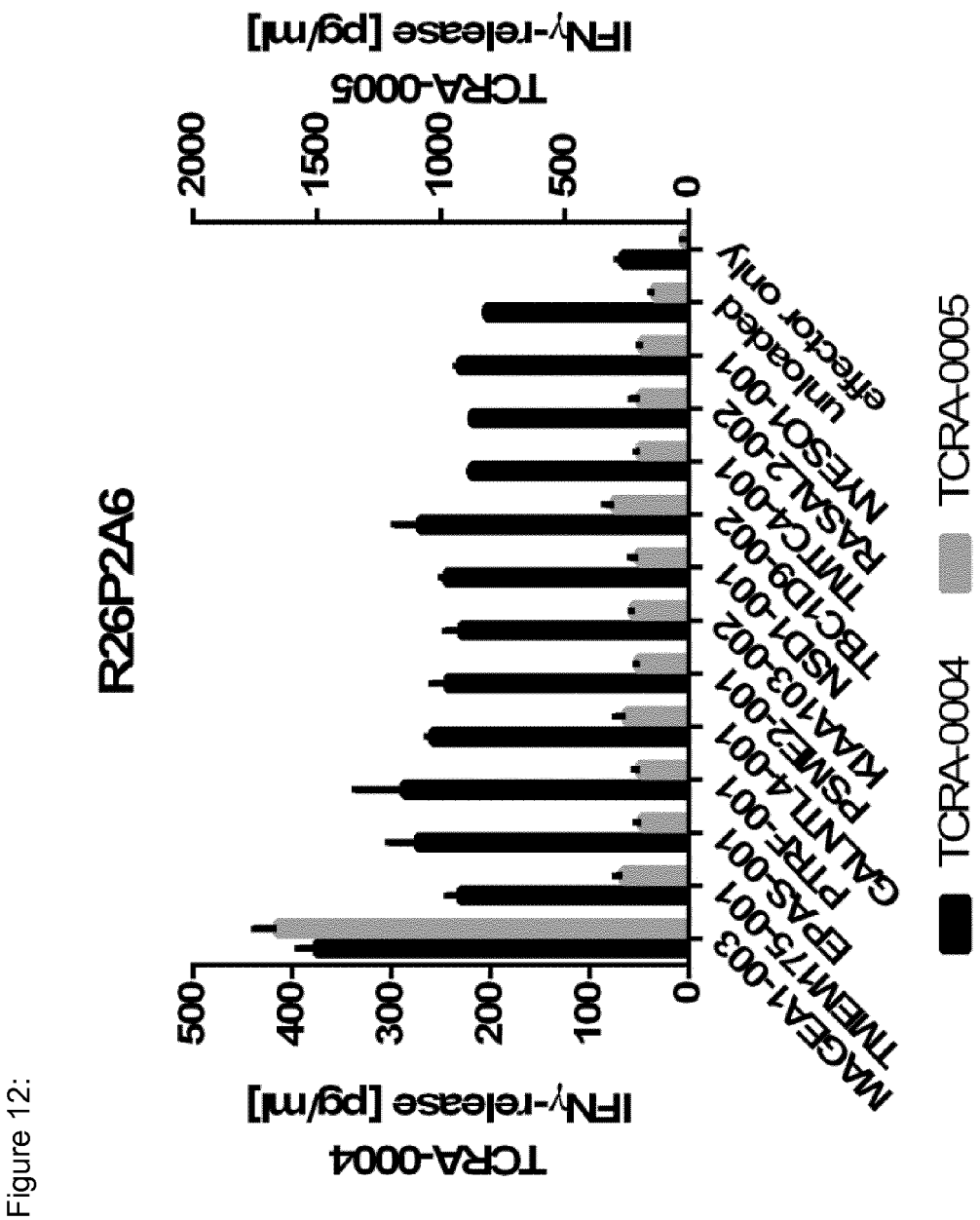

R26P2A6
TCRA-0004
IFNγ-release [pg/ml]
500
400
300
200
100
0
TCRA-0005
IFNγ-release [pg/ml]
2000
1500
1000
500
0
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
CALNTL4-001
PSME2-001
KIAA103-001
NSD1-002
TBC1D9-001
TMTC4-002
RASAL2-001
NYESO1-002
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 12:

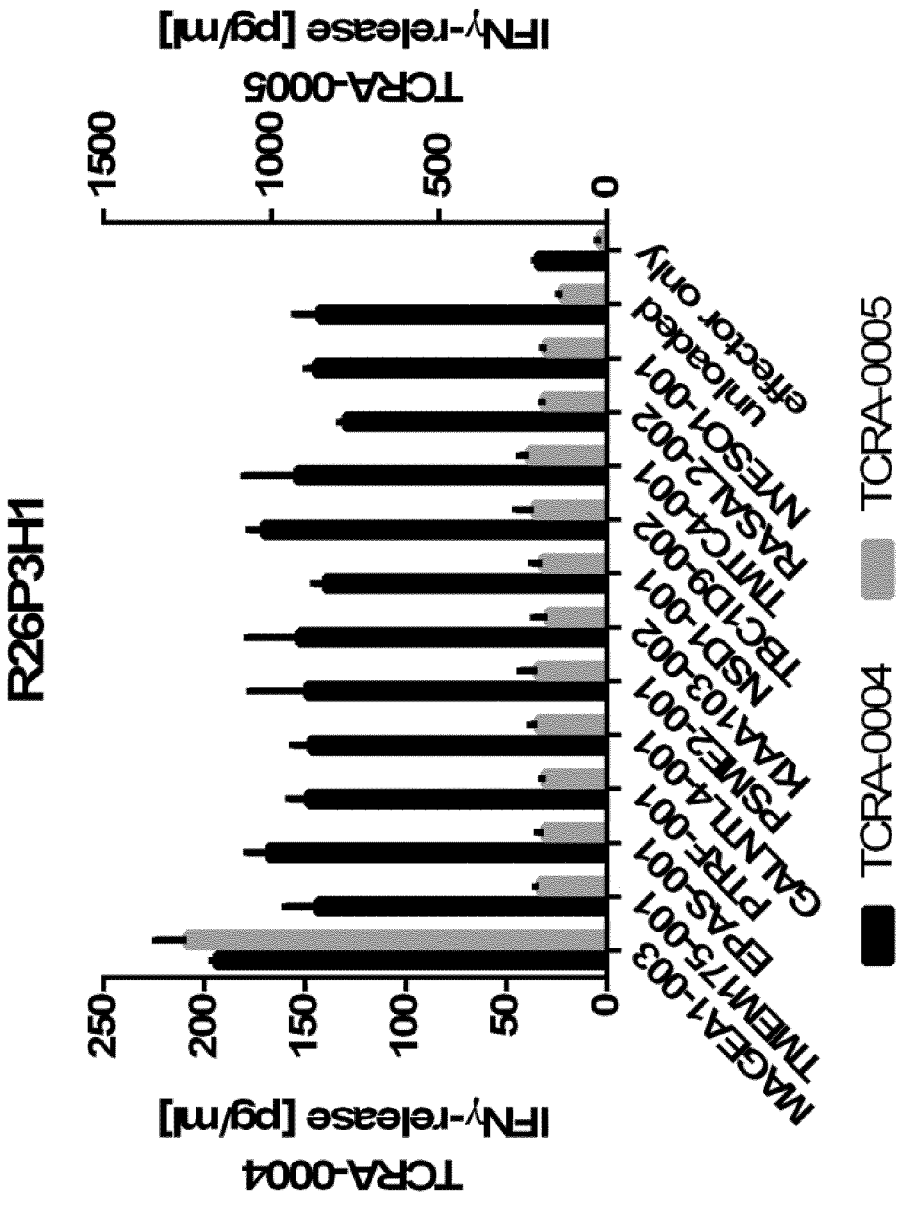

R26P3H1
TCRA-0004
IFNγ-release [pg/ml]
250
200
150
100
50
0
TCRA-0005
IFNγ-release [pg/ml]
1500
1000
500
0
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
GALNT1_4-001
PSME2-001
KIAA1033-002
NSD1-001
TBC1D9-002
TMTC4-001
RASAL2-002
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 13:

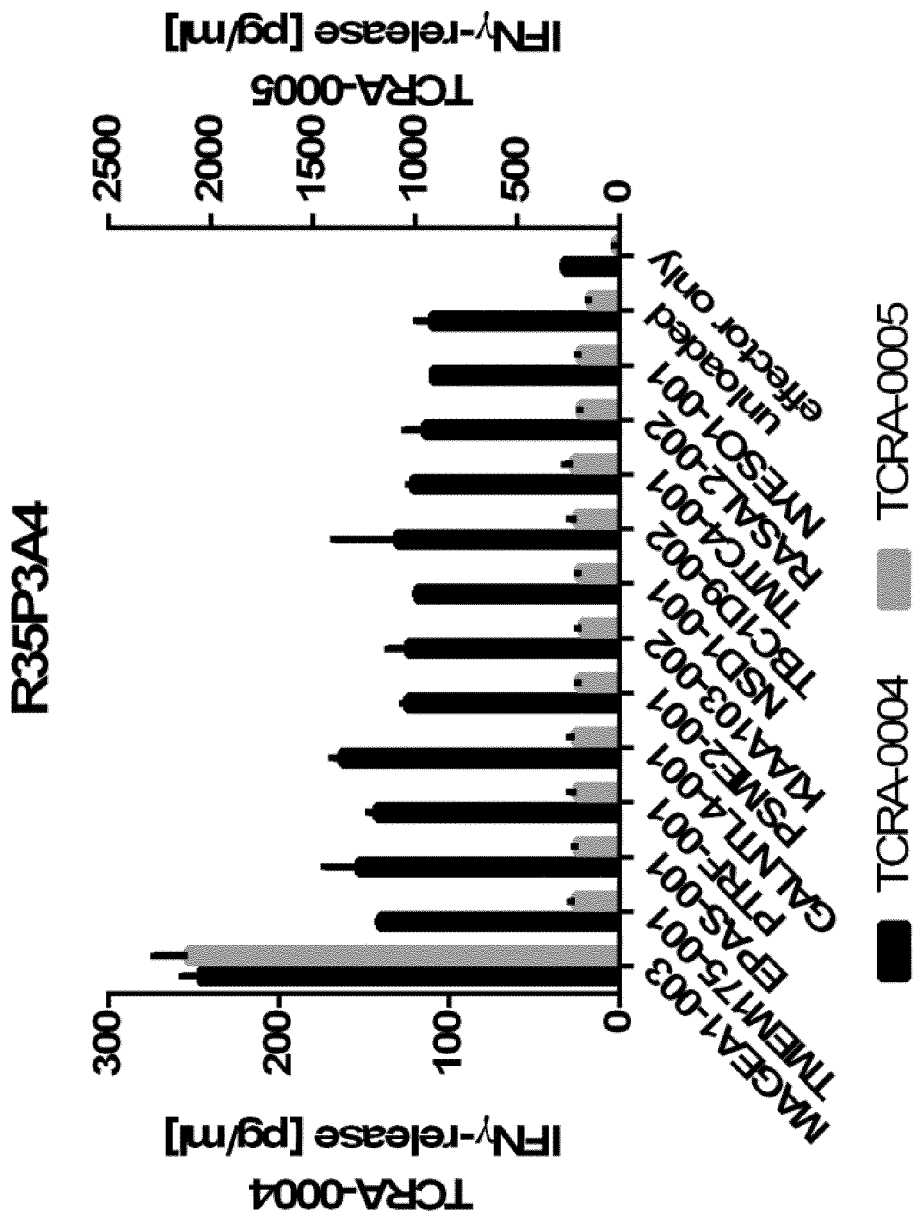

R35P3A4
TCRA-0004
IFNγ-release [pg/ml]
300
200
100
0
TCRA-0005
IFNγ-release [pg/ml]
2500
2000
1500
1000
500
0
TCRA-0004
TCRA-0005
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
CALNTL4-001
PSME2-001
KIAA1033-002
NSD1-001
TBC1D9-001
TMTC4-002
RASAL2-001
MYESO1-002
unloaded
effector only

Figure 14:

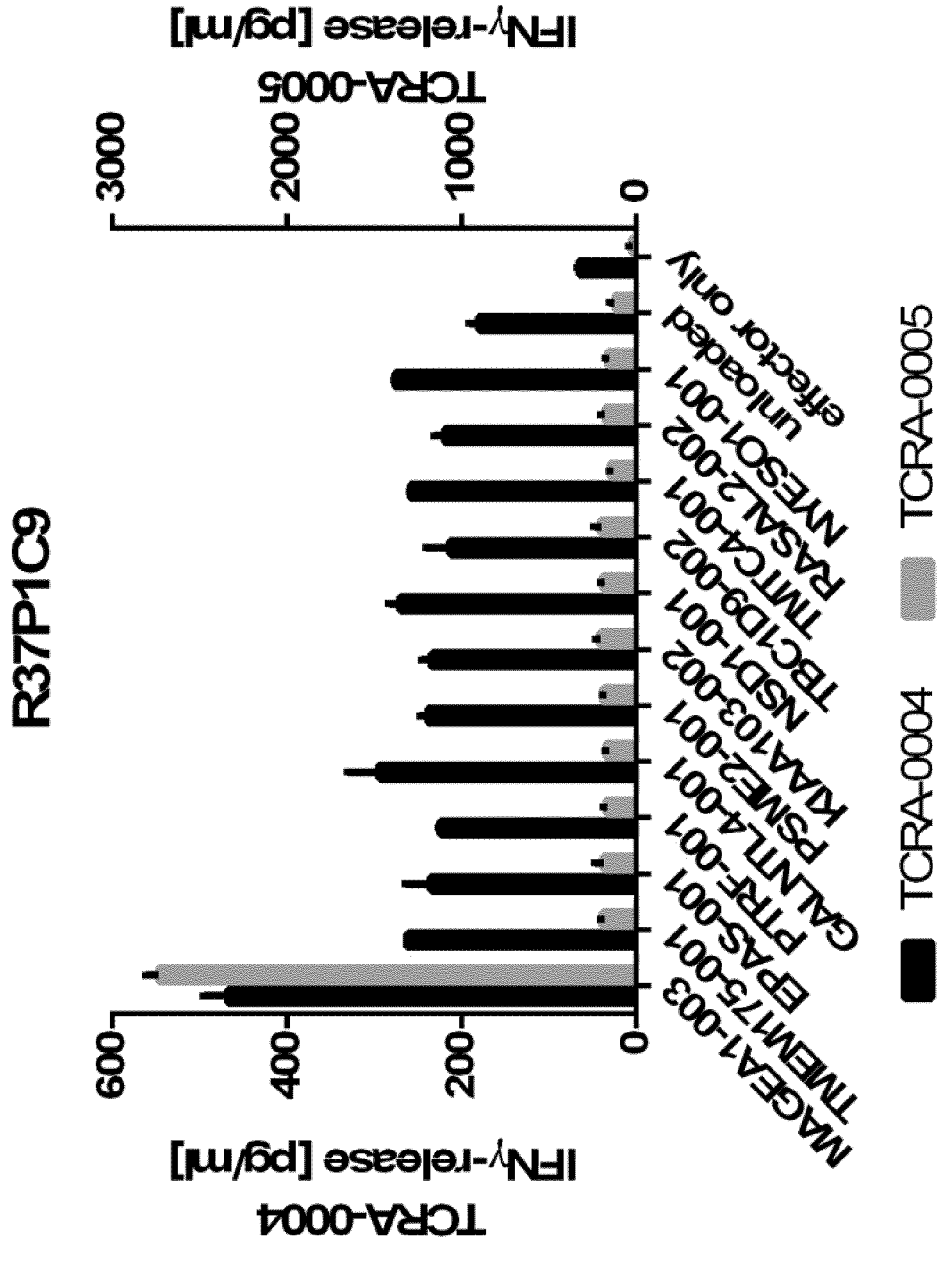

R37P1C9
TCRA-0004
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
CALNTL4-001
PSME2-001
KIAA1103-002
NSD1-001
TBC1D9-002
TMTC4-001
RASAL2-002
NMES01-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 15:

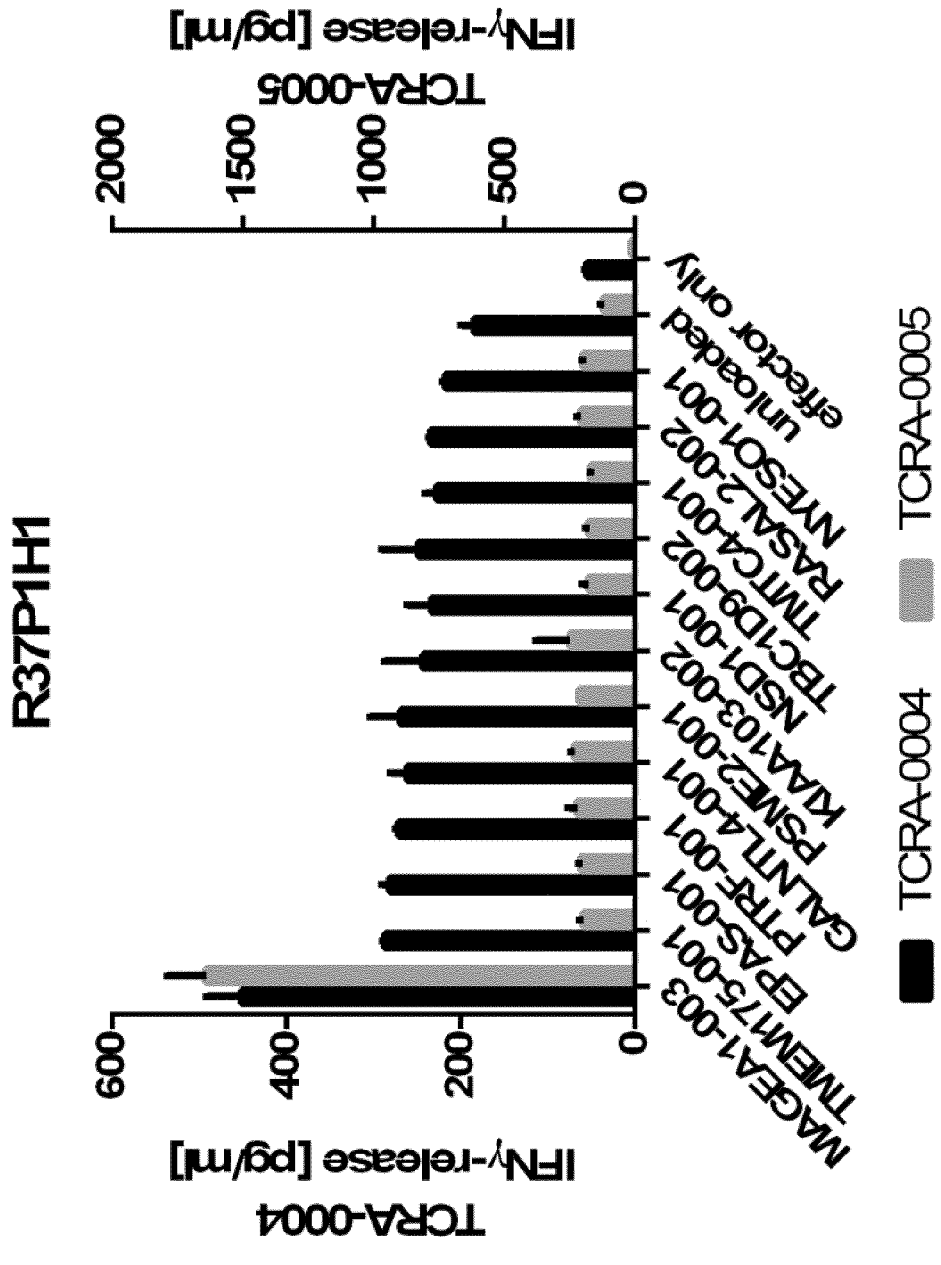

R37P1H1
TCRA-0004
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
2000
1500
1000
500
0
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
CALNTL4-001
PSME2-001
KIAA1103-002
NSD1-001
TBC1D9-002
TMTC4-001
RASAL2-002
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 16:

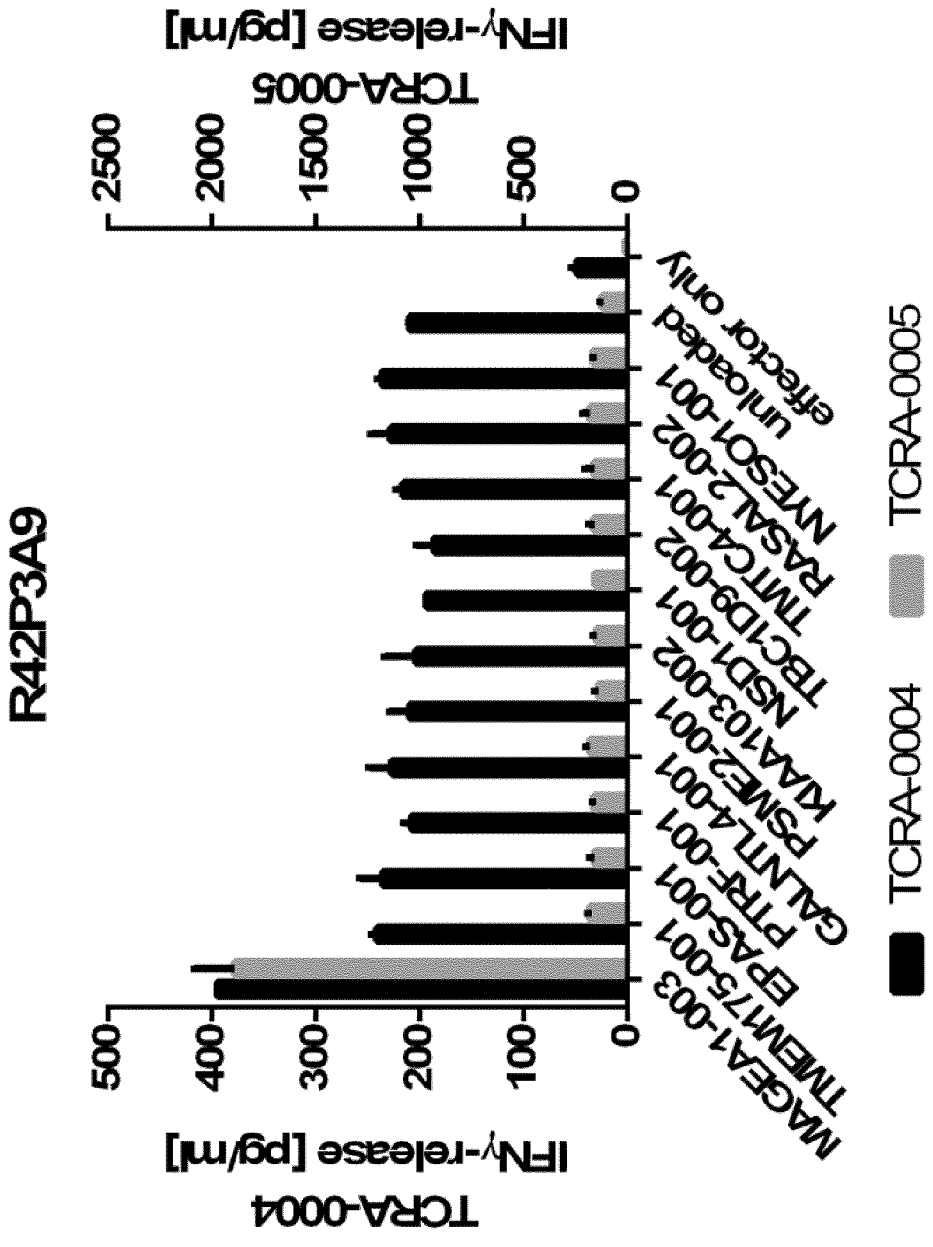

R42P3A9
TCRA-0004
IFNγ-release [pg/ml]
0
100
200
300
400
500
TCRA-0005
IFNγ-release [pg/ml]
0
500
1000
1500
2000
2500
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
GALNTL4-001
PSME2-001
KIAA1033-002
NSD1-001
TBC1D9-002
TMTC4-001
RASAL2-002
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 17:

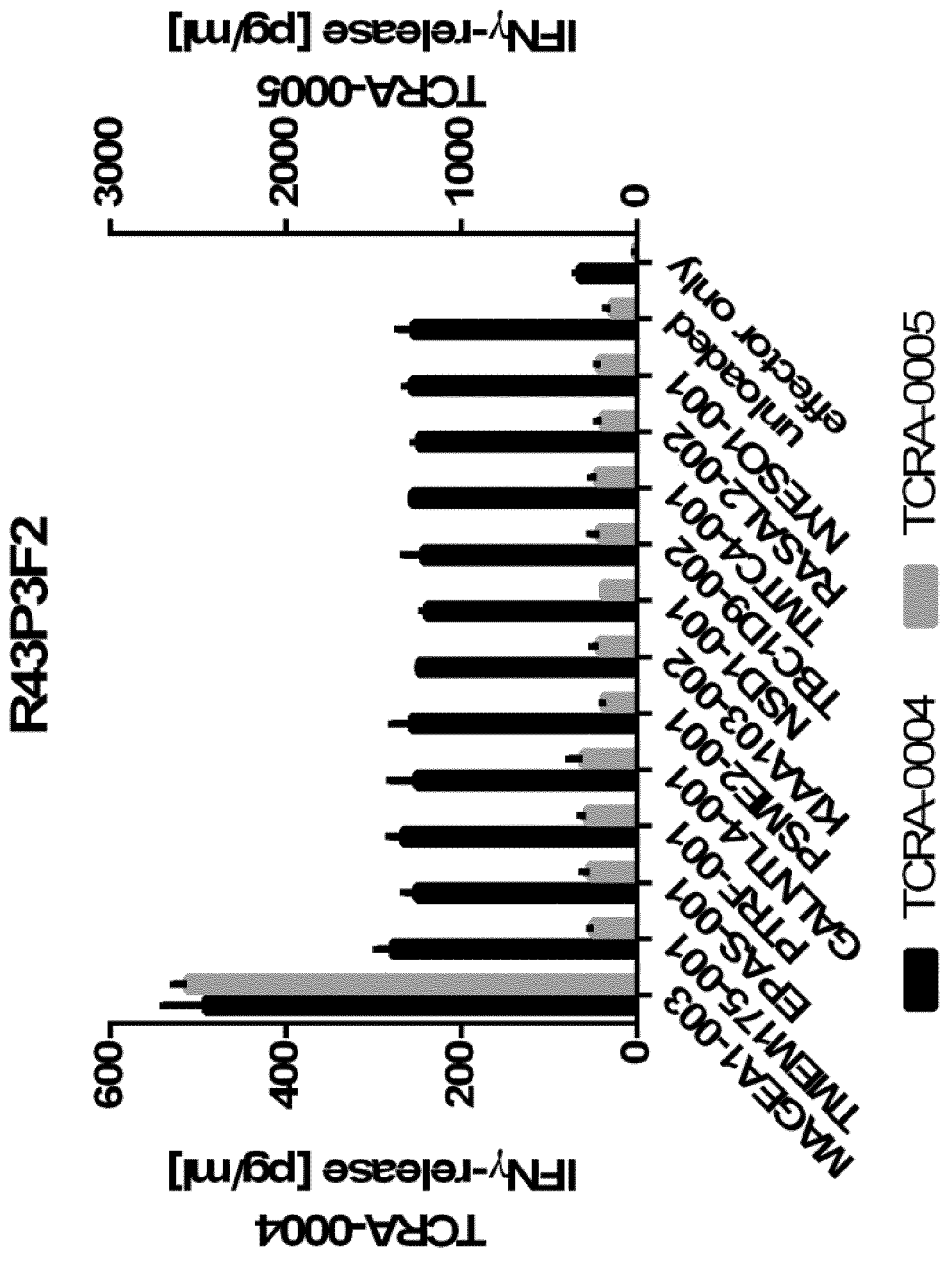

R43P3F2
TCRA-0004
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
TMEM75-001
EPAS-001
PTPRF-001
GALNT4-001
PSME2-001
KIAA1033-002
NSD1-001
TBC1D9-002
TMTC4-001
RASAL2-002
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 18:

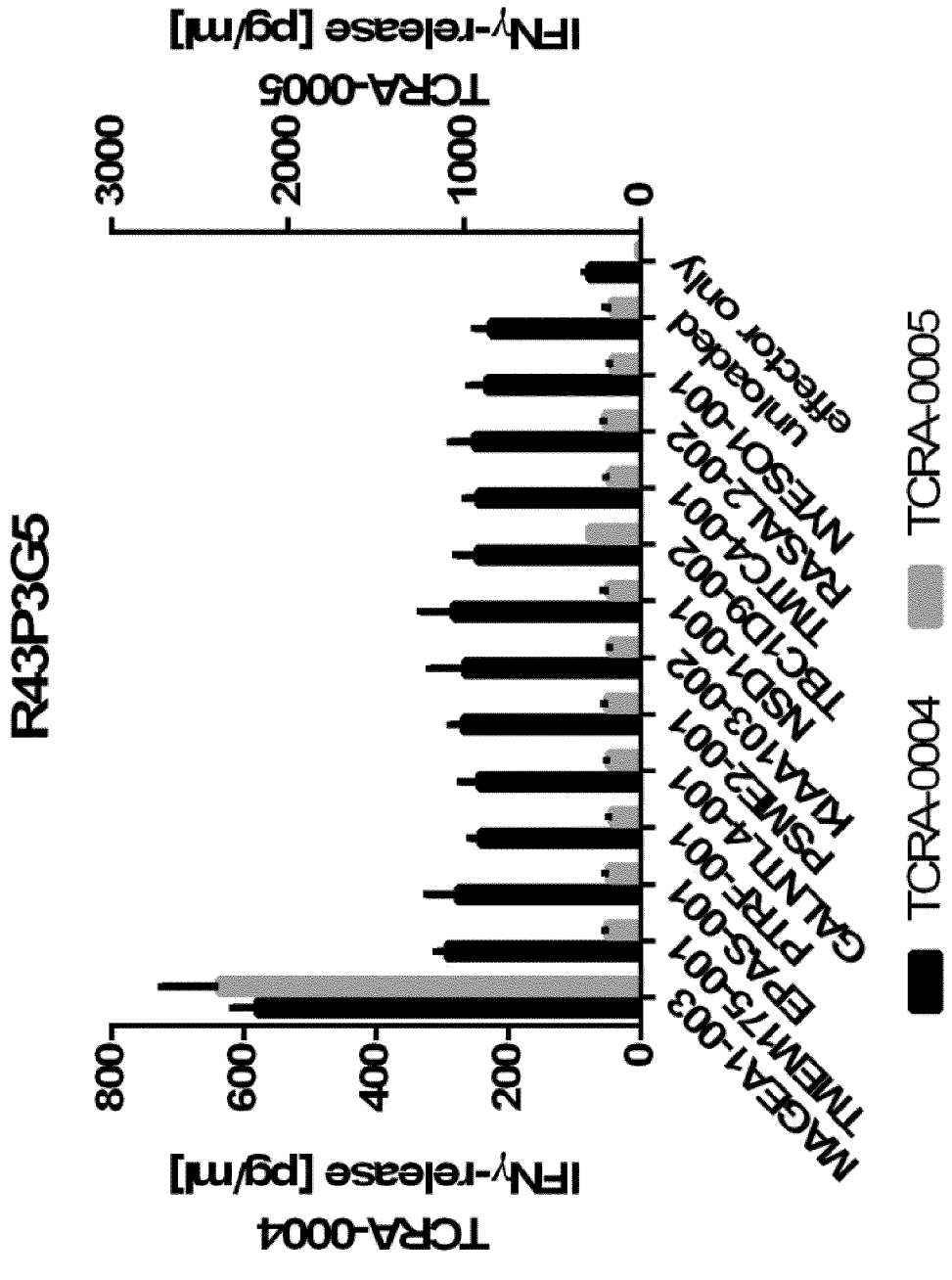

R43P3G5
TCRA-0004
IFNγ-release [pg/ml]
800
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
TMEM75-001
EPAS-001
PTRF-001
GALNT4-001
PSME2-001
KIAA1033-002
NSD1-002
TBC1D9-001
TMTC4-002
RASAL2-001
NYESO1-002
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 19:

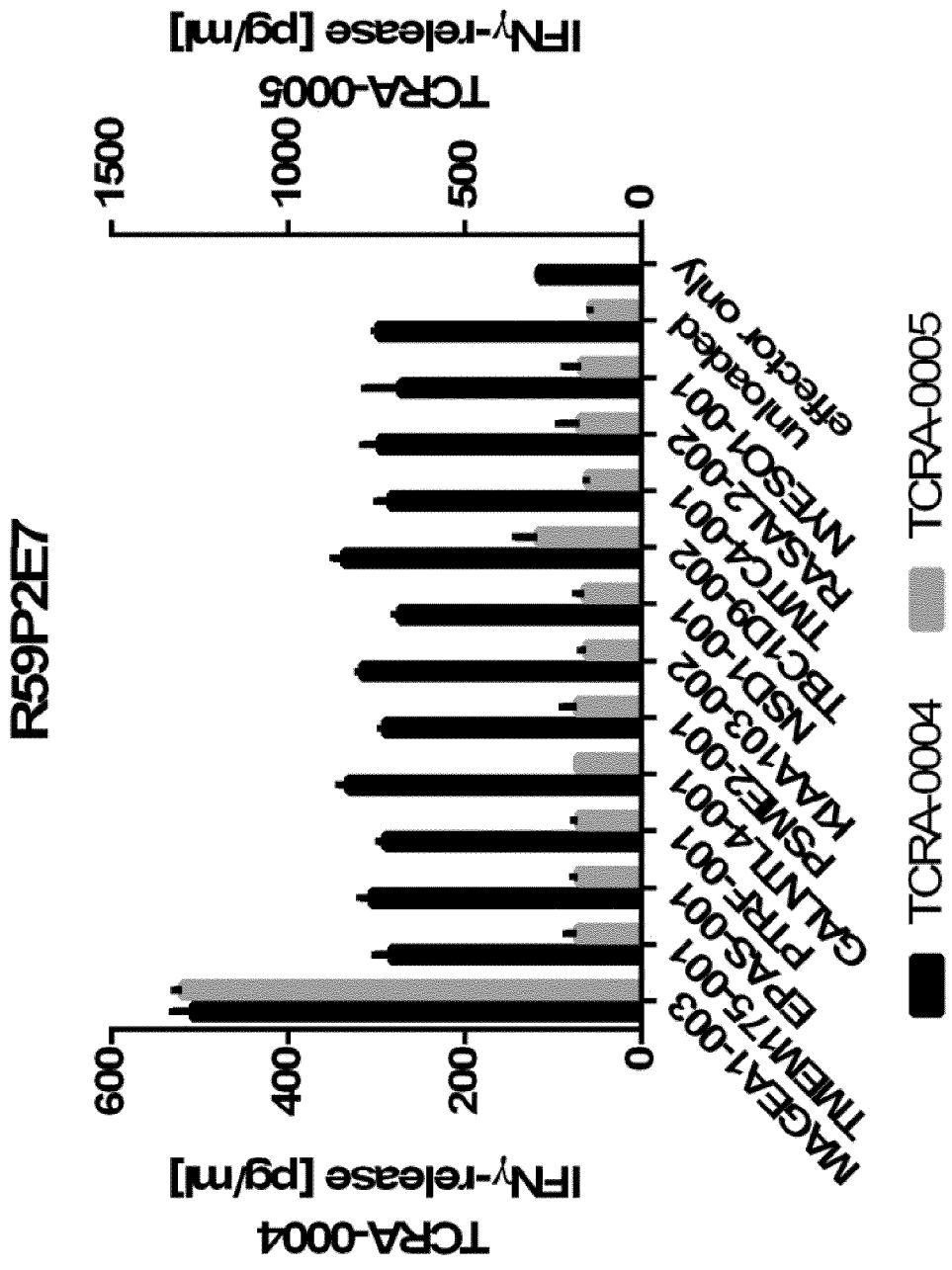
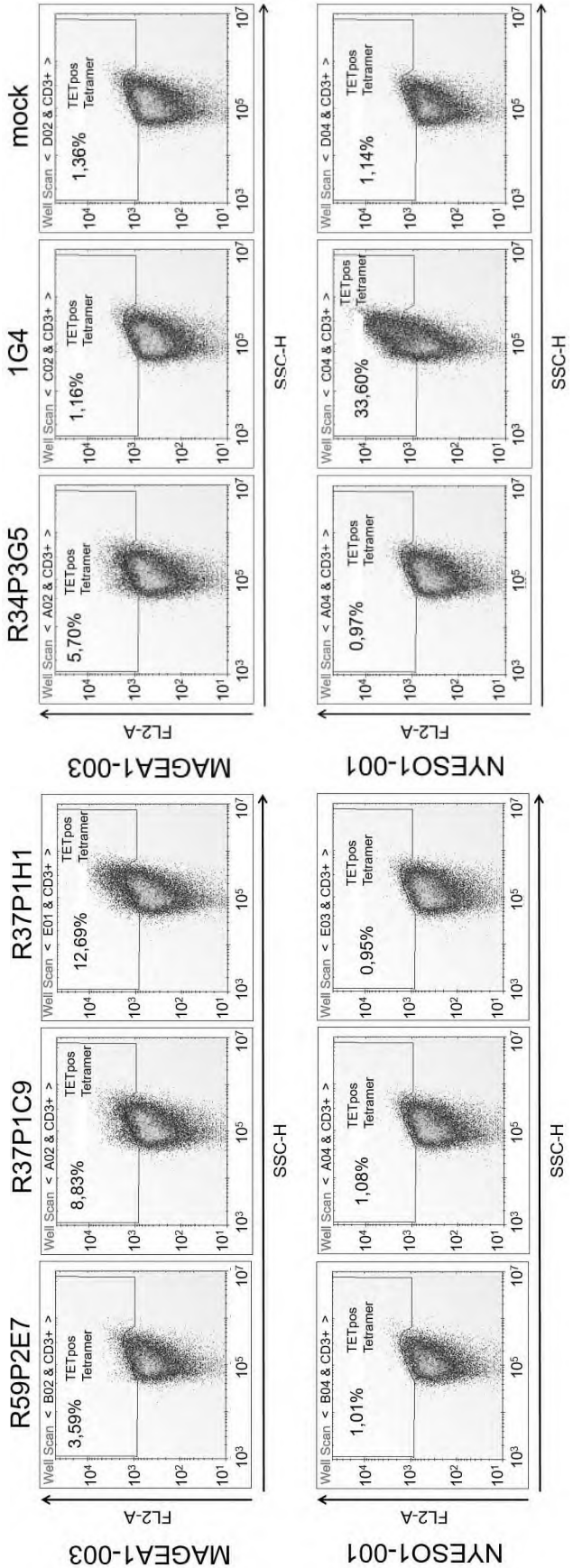

R59P2E7
TCRA-0004
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0005
IFNγ-release [pg/ml]
1500
1000
500
0
MAGEA1-003
TMEM175-001
EPAS-001
PTRF-001
CALNTL4-001
PSME2-001
KIAA1103-002
NSD1-001
TBC1D9-002
TMTC4-001
RASAL2-002
NYESO1-001
unloaded
effector only
TCRA-0004
TCRA-0005

Figure 20:

Figure 21:


R59P2E7
R37P1C9
R37P1H1
R34P3G5
1G4
mock
MAGEA1-003
NYESO1-001
FL2-A
SSC-H
Well Scan < B02 & CD3+ >
Well Scan < A02 & CD3+ >
Well Scan < E01 & CD3+ >
Well Scan < B04 & CD3+ >
Well Scan < A04 & CD3+ >
Well Scan < E03 & CD3+ >
Well Scan < A02 & CD3+ >
Well Scan < C02 & CD3+ >
Well Scan < D02 & CD3+ >
Well Scan < A04 & CD3+ >
Well Scan < C04 & CD3+ >
Well Scan < D04 & CD3+ >
TETpos Tetramer
3,59%
8,83%
12,69%
1,01%
1,08%
0,95%
5,70%
1,16%
1,36%
0,97%
33,60%
1,14%

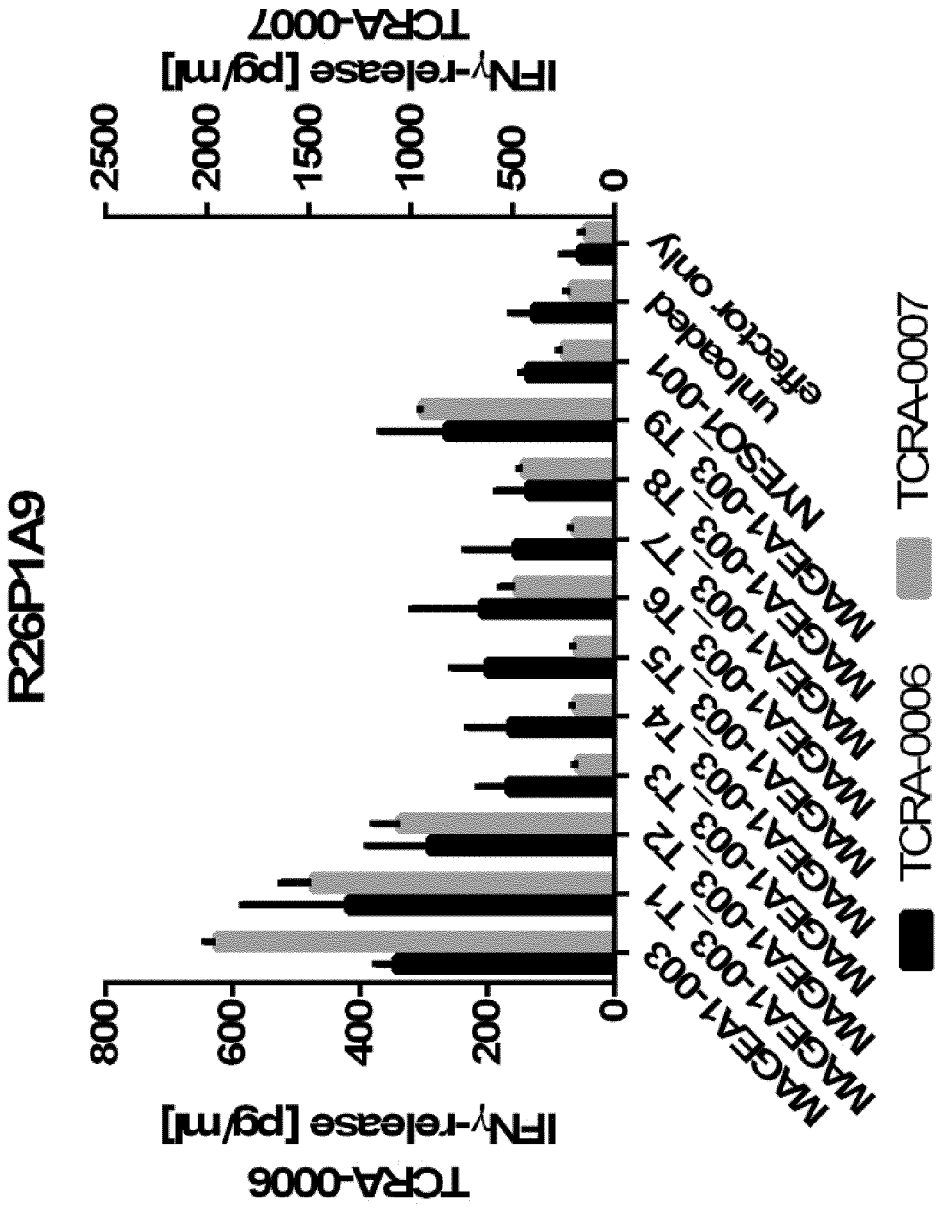

R26P1A9
TCRA-0006
IFNγ-release [pg/ml]
800
600
400
200
0
TCRA-0007
IFNγ-release [pg/ml]
2500
2000
1500
1000
500
0
MAGEA1-003
MAGEA1-003 T1
MAGEA1-003 T2
MAGEA1-003 T3
MAGEA1-003 T4
MAGEA1-003 T5
MAGEA1-003 T6
MAGEA1-003 T7
MAGEA1-003 T8
MAGEA1-003 T9
NYESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 22:

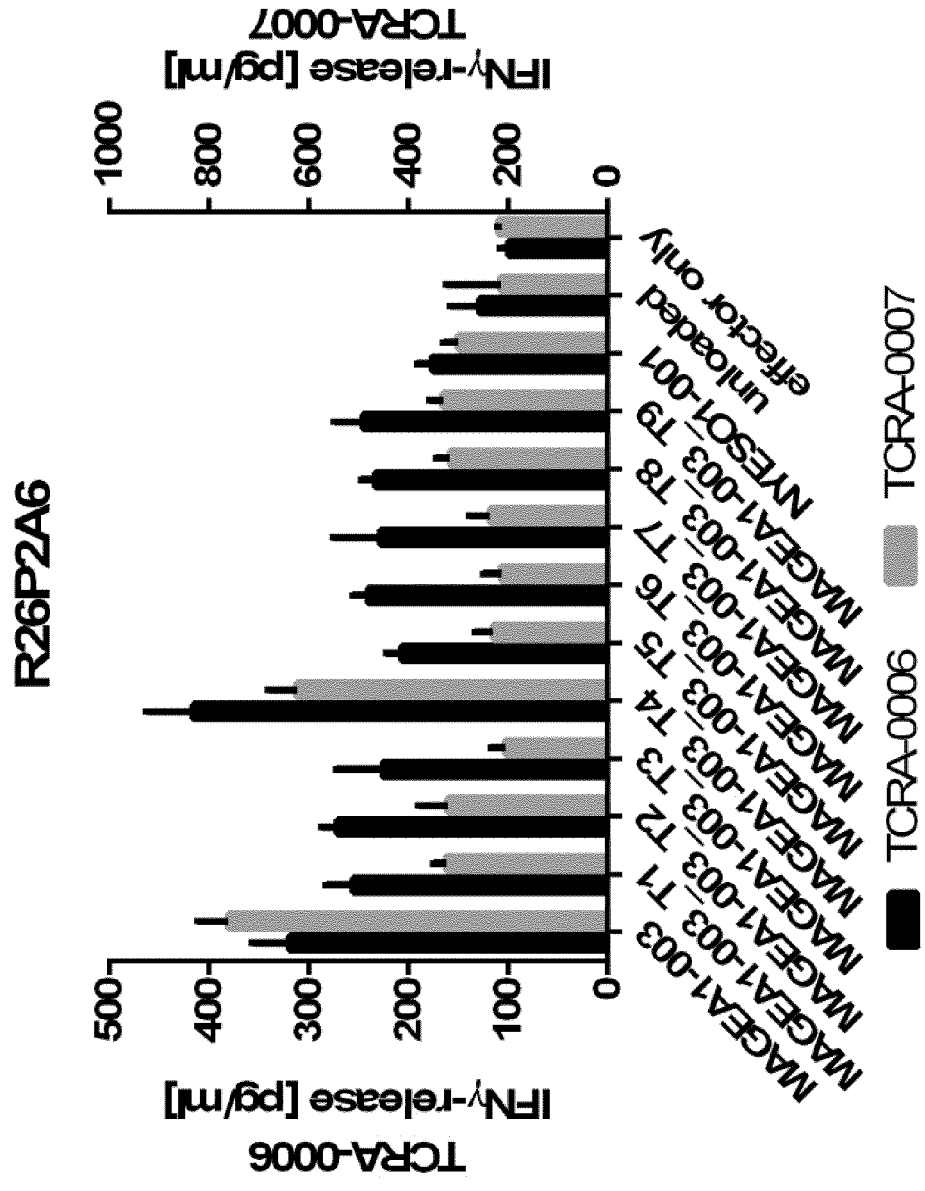

R26P2A6
TCRA-0006
IFNγ-release [pg/ml]
0
100
200
300
400
500
TCRA-0007
IFNγ-release [pg/ml]
0
200
400
600
800
1000
MAGEA1-003
MAGEA1-003 T1
MAGEA1-003 T2
MAGEA1-003 T3
MAGEA1-003 T4
MAGEA1-003 T5
MAGEA1-003 T6
MAGEA1-003 T7
MAGEA1-003 T8
MAGEA1-003 T9
NYESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 23:

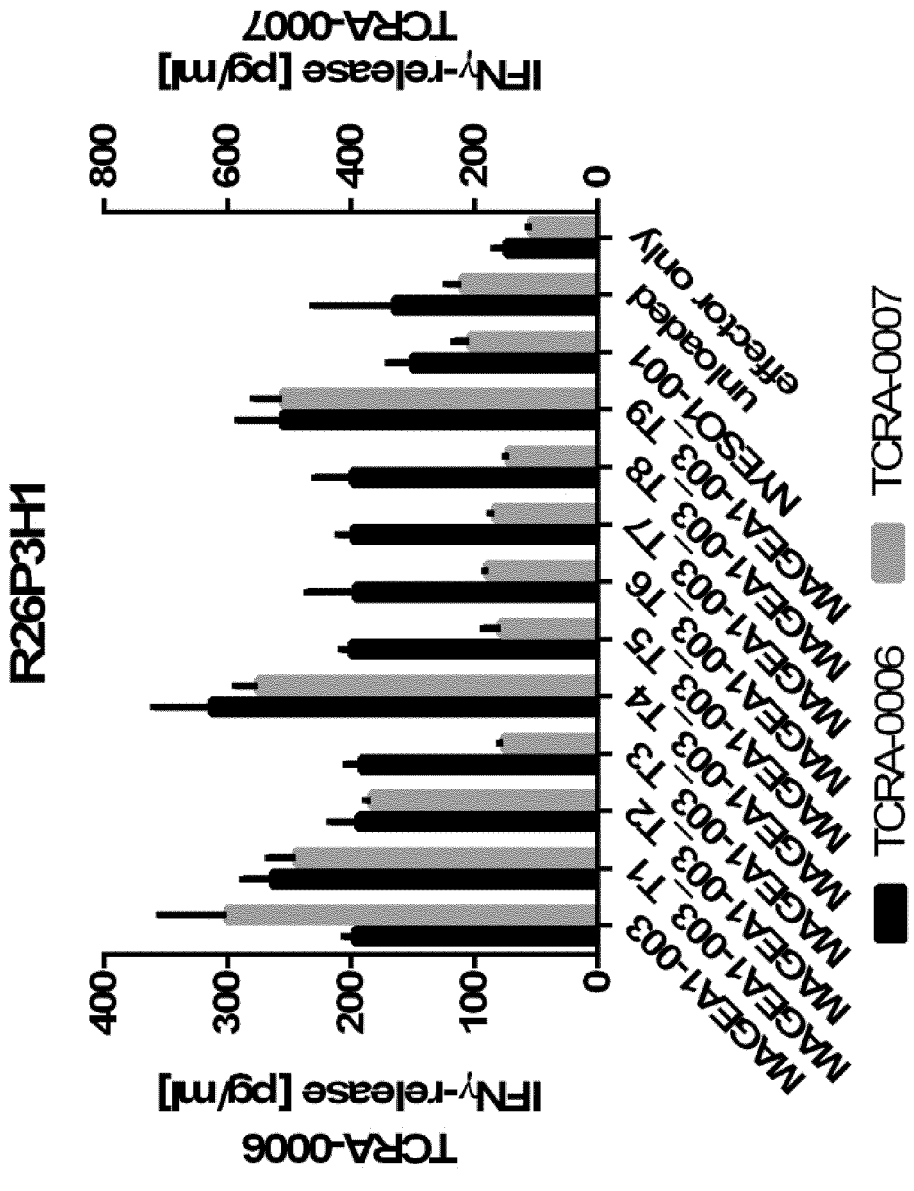

R26P3H1
TCRA-0006
IFNγ-release [pg/ml]
0
100
200
300
400
TCRA-0007
IFNγ-release [pg/ml]
0
200
400
600
800
MAGEA1-003
MAGEA1-003_T1
MAGEA1-003_T2
MAGEA1-003_T3
MAGEA1-003_T4
MAGEA1-003_T5
MAGEA1-003_T6
MAGEA1-003_T7
MAGEA1-003_T8
NYESO1_T9
NYESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 24:

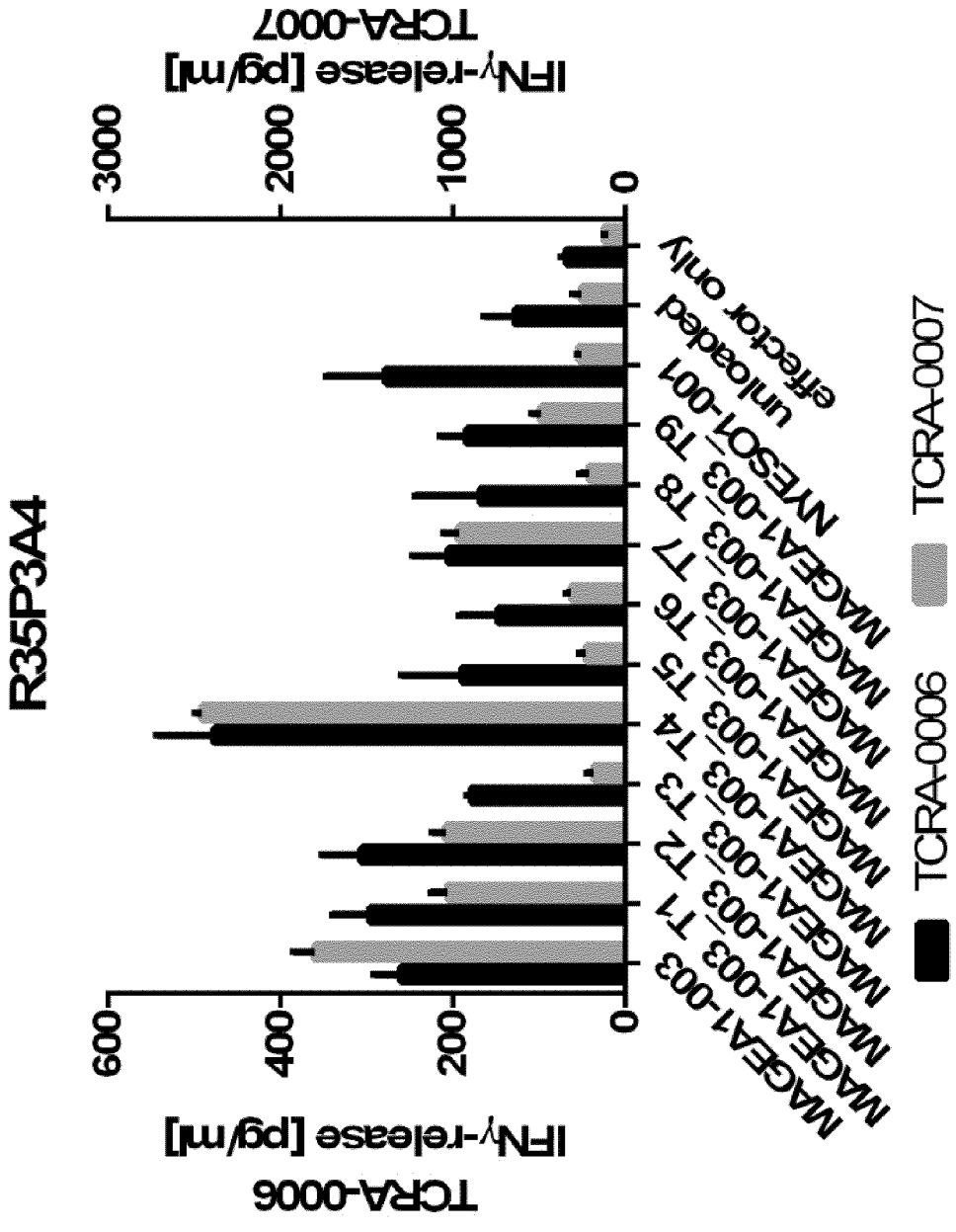

R35P3A4
TCRA-0006
IFNγ-release [pg/ml]
600
400
200
0
TCRA-0007
IFNγ-release [pg/ml]
3000
2000
1000
0
MAGEA1-003
MAGEA1-003_T1
MAGEA1-003_T2
MAGEA1-003_T3
MAGEA1-003_T4
MAGEA1-003_T5
MAGEA1-003_T6
MAGEA1-003_T7
MAGEA1-003_T8
MAGEA1-003_T9
NYESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 25:

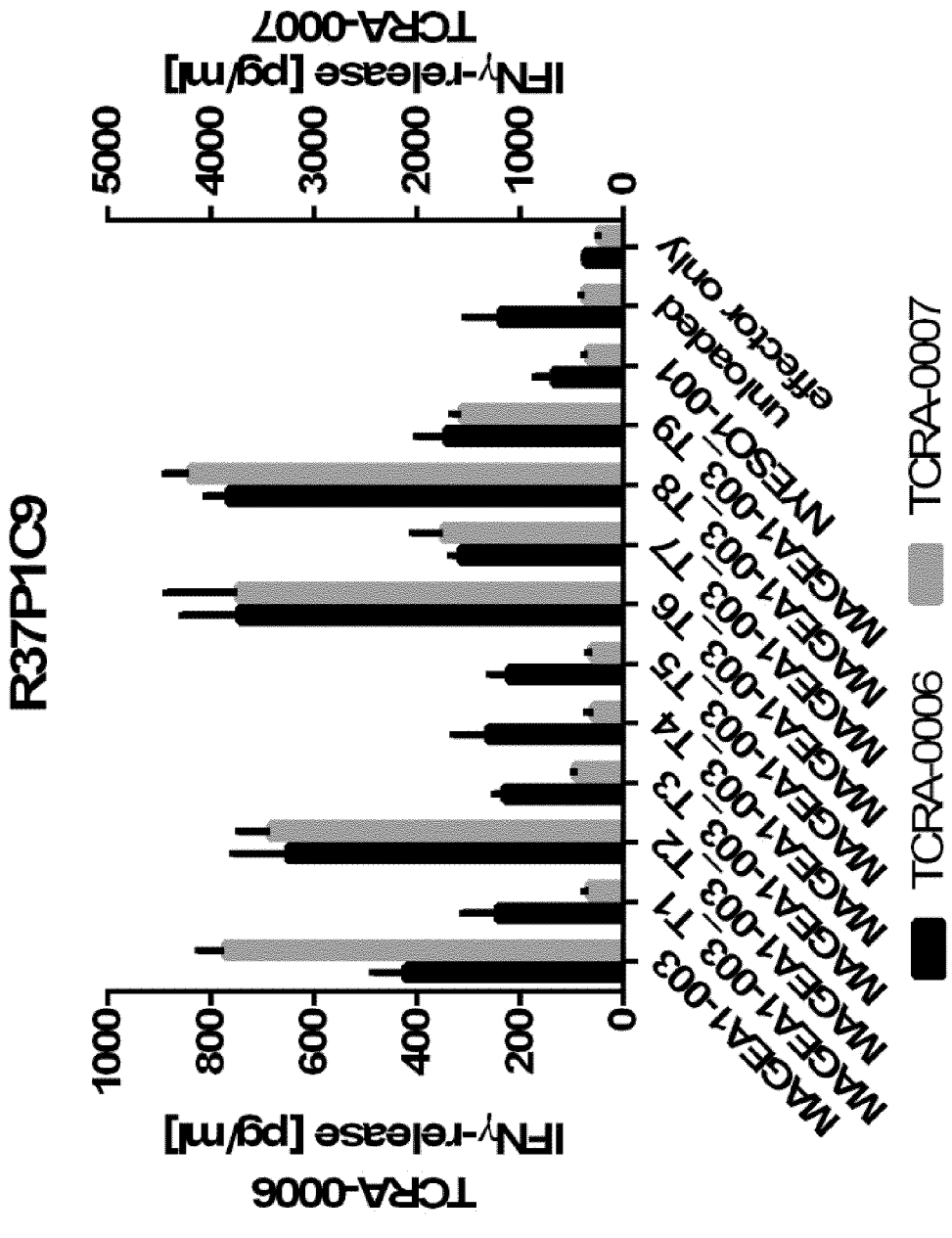

R37P1C9
TCRA-0006
IFNγ-release [pg/ml]
1000
800
600
400
200
0
TCRA-0007
IFNγ-release [pg/ml]
5000
4000
3000
2000
1000
0
MAGEA1-003
MAGEA1-003_T1
MAGEA1-003_T2
MAGEA1-003_T3
MAGEA1-003_T4
MAGEA1-003_T5
MAGEA1-003_T6
MAGEA1-003_T7
MAGEA1-003_T8
MAGEA1-003_T9
NYESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 26:

Figure 27:

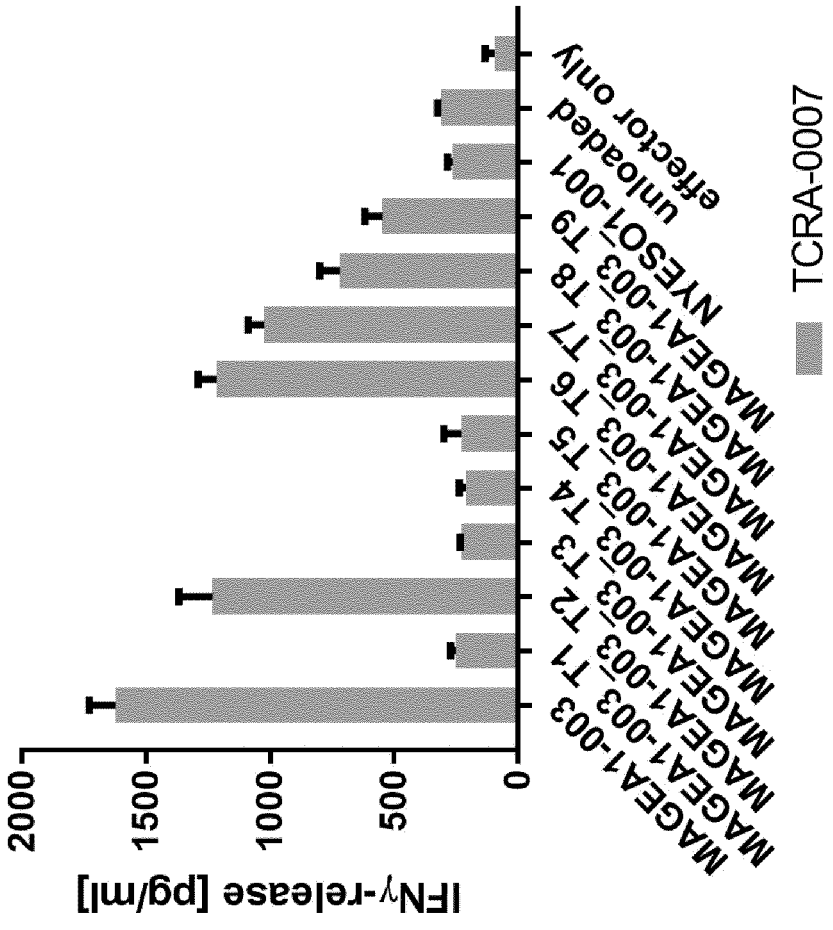
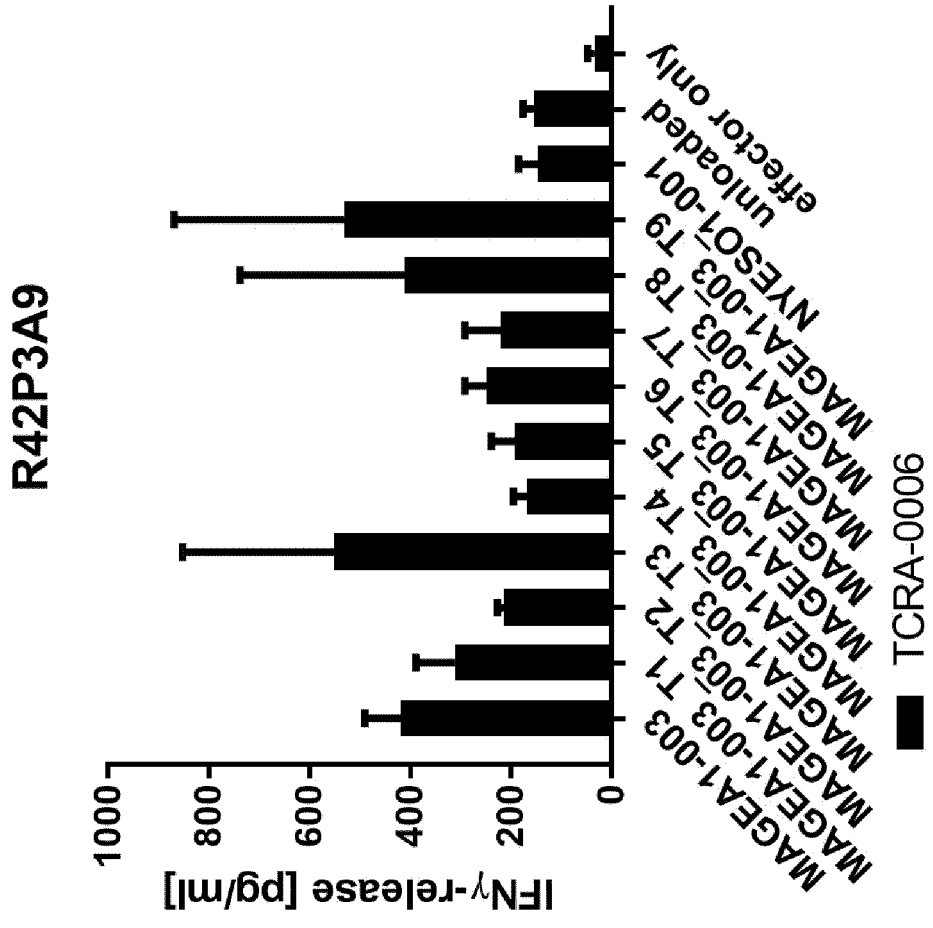

R37P1H1
IFNγ-release [pg/ml]
2000
1500
1000
500
0
MAGEA1-003
MAGEA1-003 T1
MAGEA1-003 T2
MAGEA1-003 T3
MAGEA1-003 T4
MAGEA1-003 T5
MAGEA1-003 T6
MAGEA1-003 T7
MAGEA1-003 T8
MAGEA1-003 T9
NYESO1-001
unloaded
effector only
TCRA-0007

Figure 28:


R42P3A9
IFNγ-release [pg/ml]
1000
800
600
400
200
0
MAGEA1-003 T1
MAGEA1-003 T2
MAGEA1-003 T3
MAGEA1-003 T4
MAGEA1-003 T5
MAGEA1-003 T6
MAGEA1-003 T7
MAGEA1-003 T8
MAGEA1-003 T9
NYESO1-001
unloaded
effector only
TCRA-0006

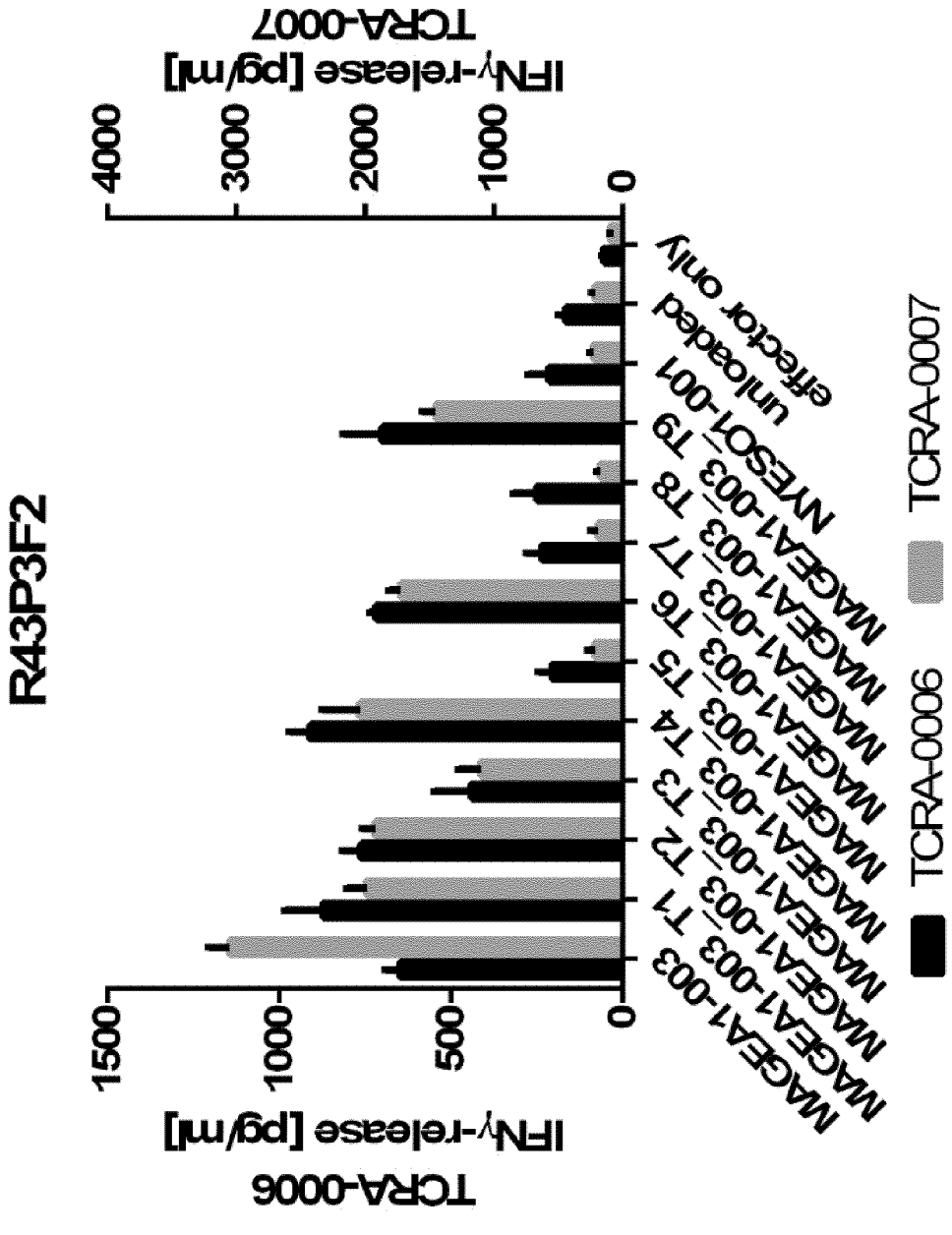

R43P3F2
TCRA-0006
IFNγ-release [pg/ml]
1500
1000
500
0
TCRA-0007
IFNγ-release [pg/ml]
4000
3000
2000
1000
0
MAGEA1-003 T1
MAGEA1-003 T2
MAGEA1-003 T3
MAGEA1-003 T4
MAGEA1-003 T5
MAGEA1-003 T6
MAGEA1-003 T7
MAGEA1-003 T8
MAGEA1-003 T9
NYESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 29:

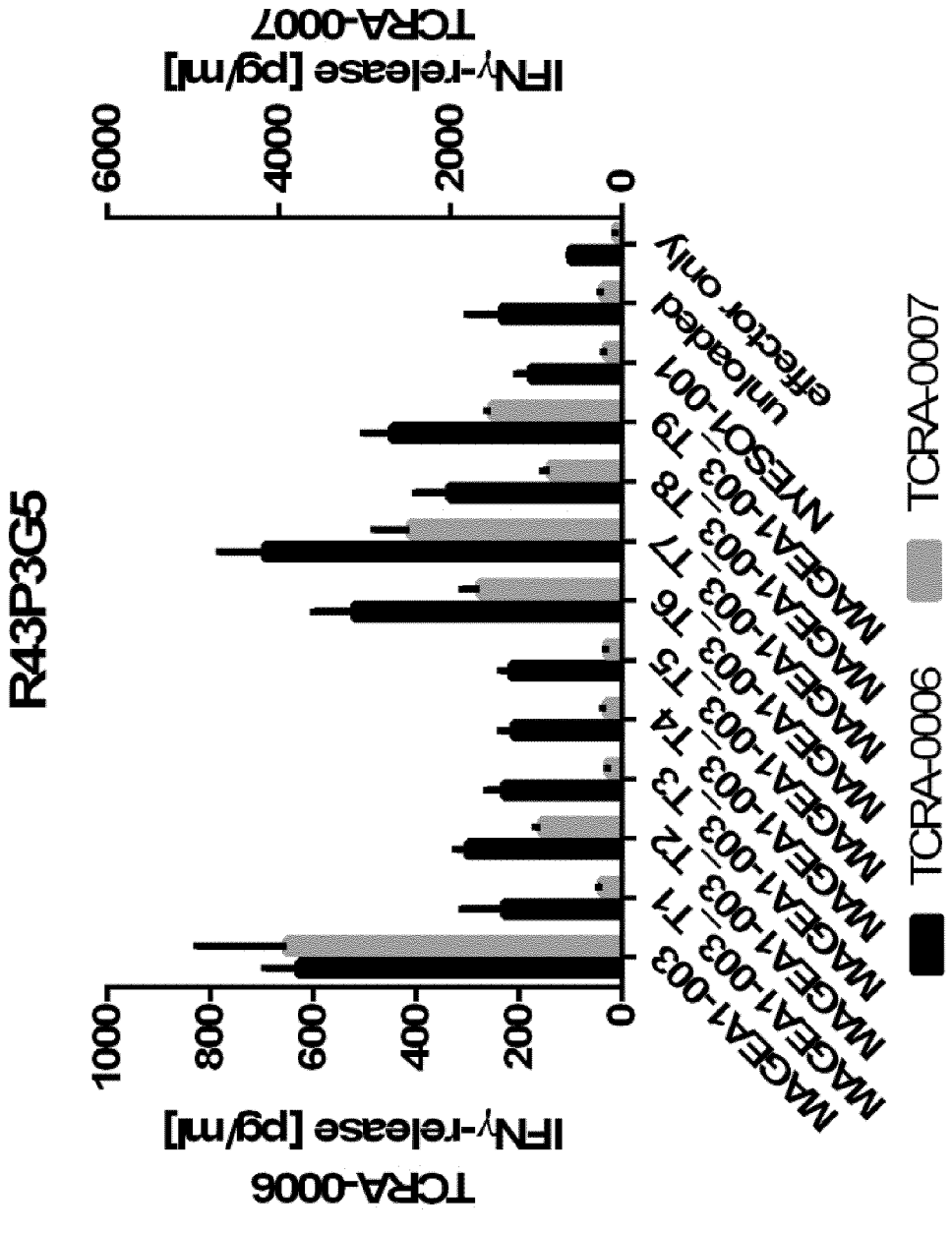

R43P3G5
TCRA-0006
IFNγ-release [pg/ml]
0
200
400
600
800
1000
TCRA-0007
IFNγ-release [pg/ml]
0
2000
4000
6000
MAGEA1-003
MAGEA1-003_T1
MAGEA1-003_T2
MAGEA1-003_T3
MAGEA1-003_T4
MAGEA1-003_T5
MAGEA1-003_T6
MAGEA1-003_T7
MAGEA1-003_T8
MAGEA1-003_T9
NYESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 30:

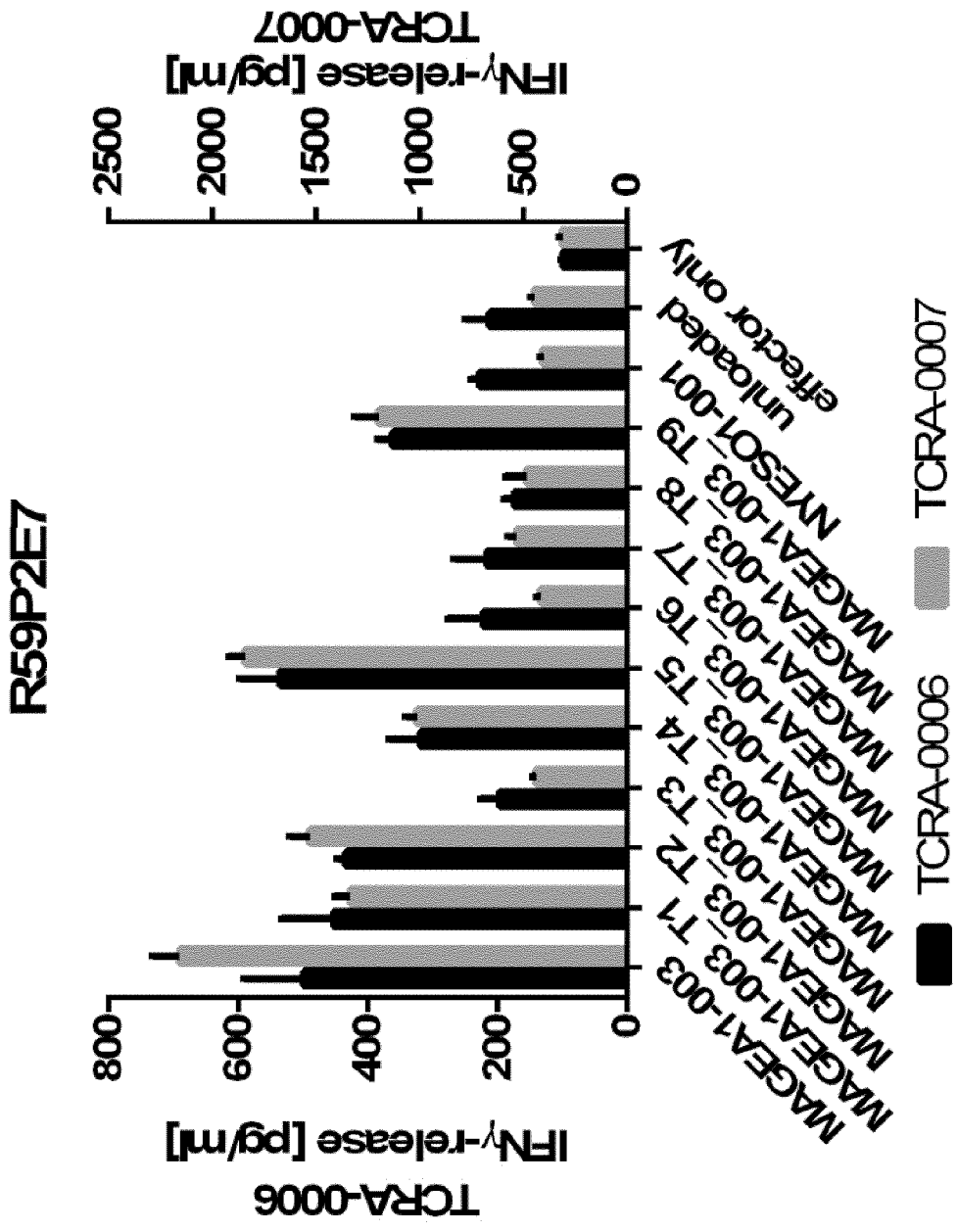

R59P2E7
TCRA-0006
IFNγ-release [pg/ml]
800
600
400
200
0
TCRA-0007
IFNγ-release [pg/ml]
2500
2000
1500
1000
500
0
MAGEA1-003
MAGEA1-003_T1
MAGEA1-003_T2
MAGEA1-003_T3
MAGEA1-003_T4
MAGEA1-003_T5
MAGEA1-003_T6
MAGEA1-003_T7
MAGEA1-003_T8
MAGEA1-003_T9
NY-ESO1-001
unloaded
effector only
TCRA-0006
TCRA-0007

Figure 31:

Figure 32:

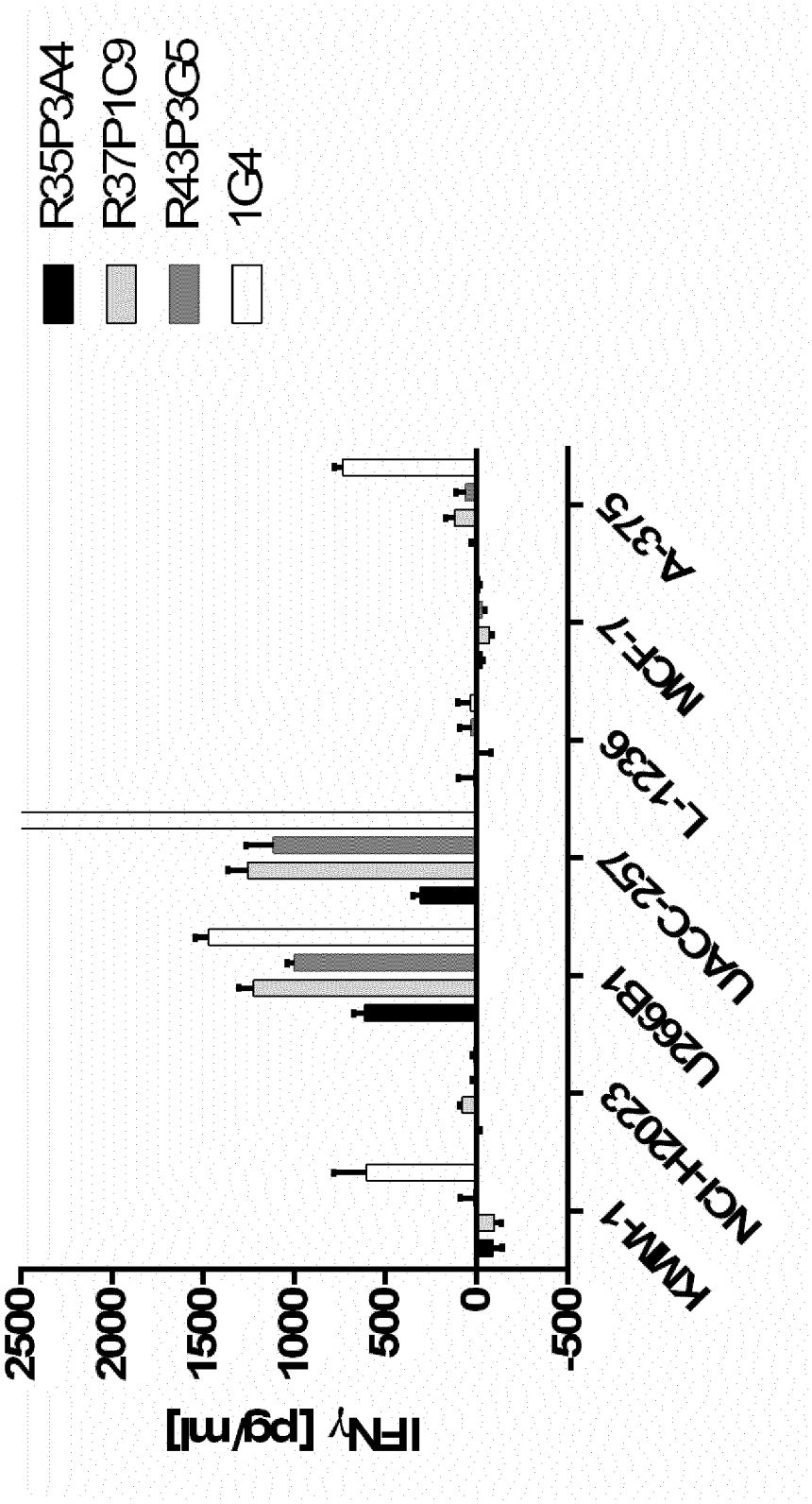

R35P3A4
R37P1C9
R43P3G5
1G4
IFNγ [pg/ml]
2500
2000
1500
1000
500
0
-500
KMM-1
NCI-H2023
U266B1
UACC-257
L-1236
MCF-7
A-375

Figure 33:

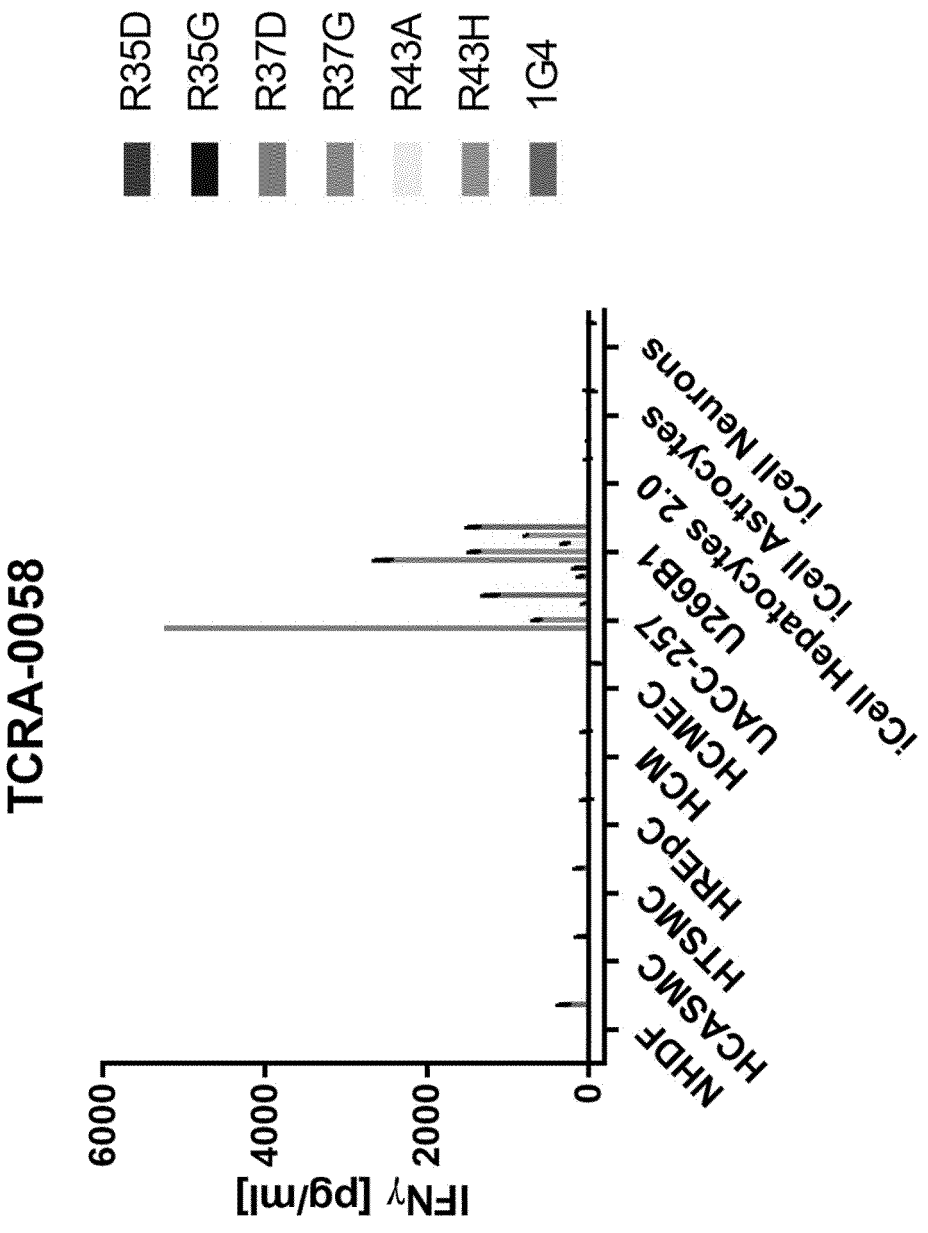

TCRA-0058
R35D
R35G
R37D
R37G
R43A
R43H
1G4
IFNγ [pg/ml]
6000
4000
2000
0
NHDF
HCASMC
HTSMC
HREPC
HCM
HCMEC
UACC-257
U266B1
iCell Hepatocytes 2.0
iCell Astrocytes
iCell Neurons

Figure 34:

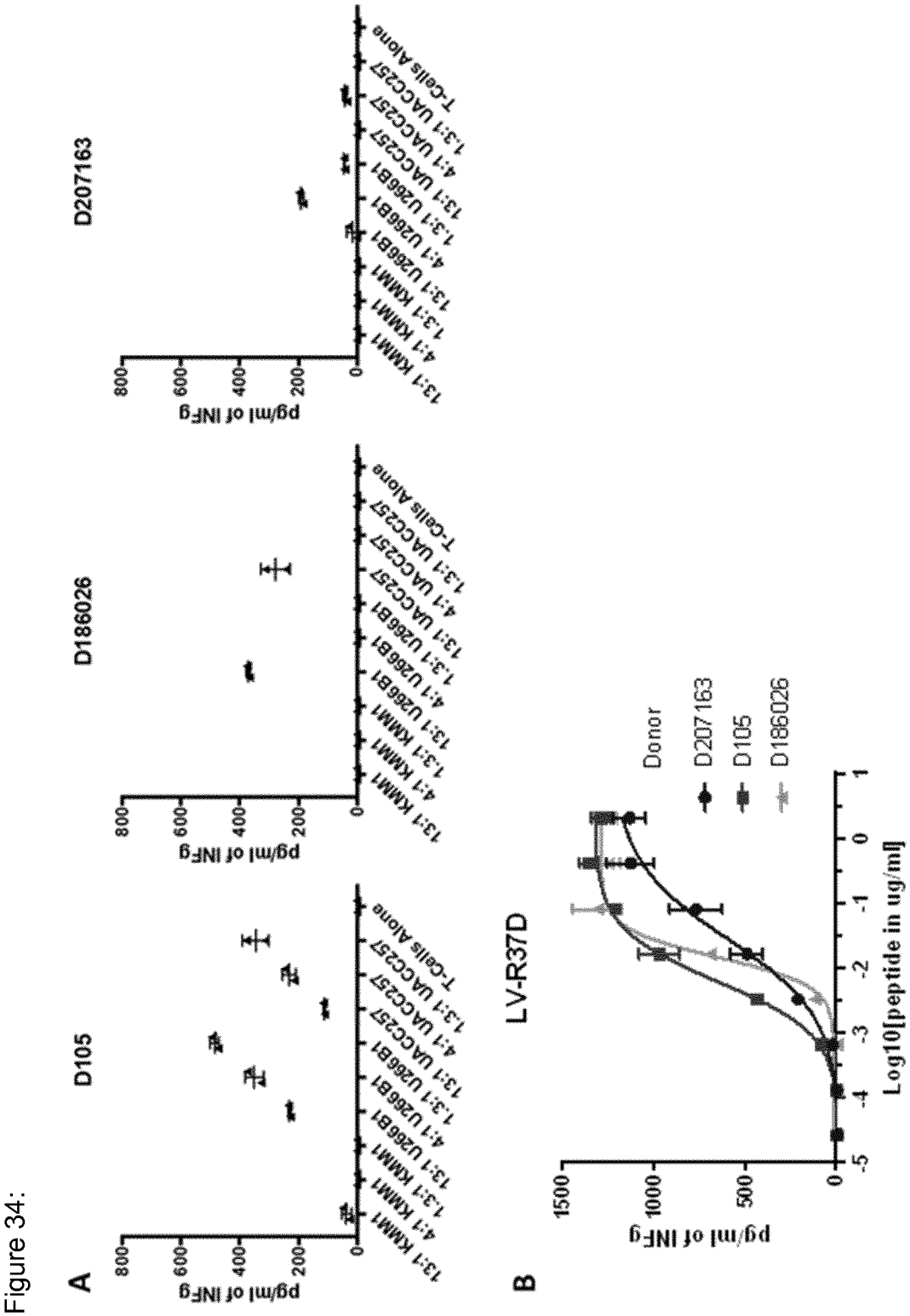
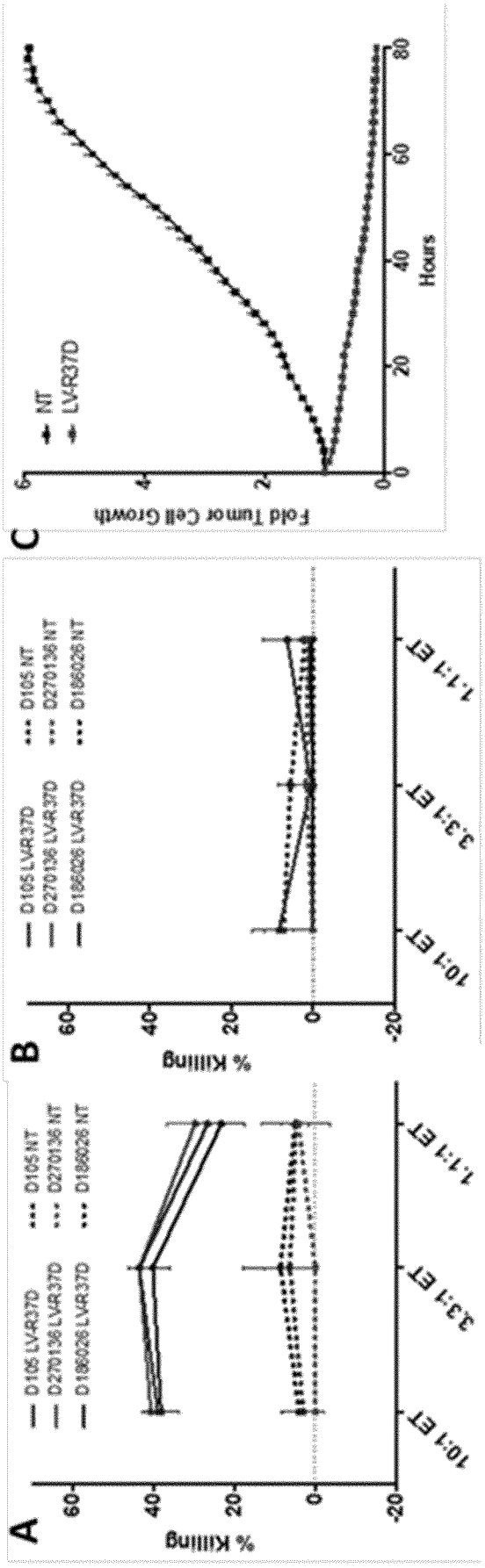

A
D105
D186026
D207163
pg/ml of INFg
800
600
400
200
0
13:1 KMM1
4:1 KMM1
1.3:1 KMM1
13:1 U266B1
4:1 U266B1
1.3:1 U266B1
13:1 UACC257
4:1 UACC257
1.3:1 UACC257
T-cells Alone
B
LV-R37D
pg/ml of INFg
1500
1000
500
0
Donor
D207163
D105
D186026
-5
-4
-3
-2
-1
0
1
Log10[peptide in ug/ml]

Figure 35:


A
% Killing
60
40
20
0
-20
D105 LVR37D
D270136 LVR37D
D1866026 LVR37D
D105 NT
D270136 NT
D1866026 NT
10:1 ET
3.3:1 ET
1.1:1 ET
B
% Killing
60
40
20
0
-20
D105 LVR37D
D270136 LVR37D
D1866026 LVR37D
D105 NT
D270136 NT
D1866026 NT
10:1 ET
3.3:1 ET
1.1:1 ET
C
Fold Tumor Cell Growth
6
4
2
0
NT
LVR37D
0
20
40
60
80
Hours

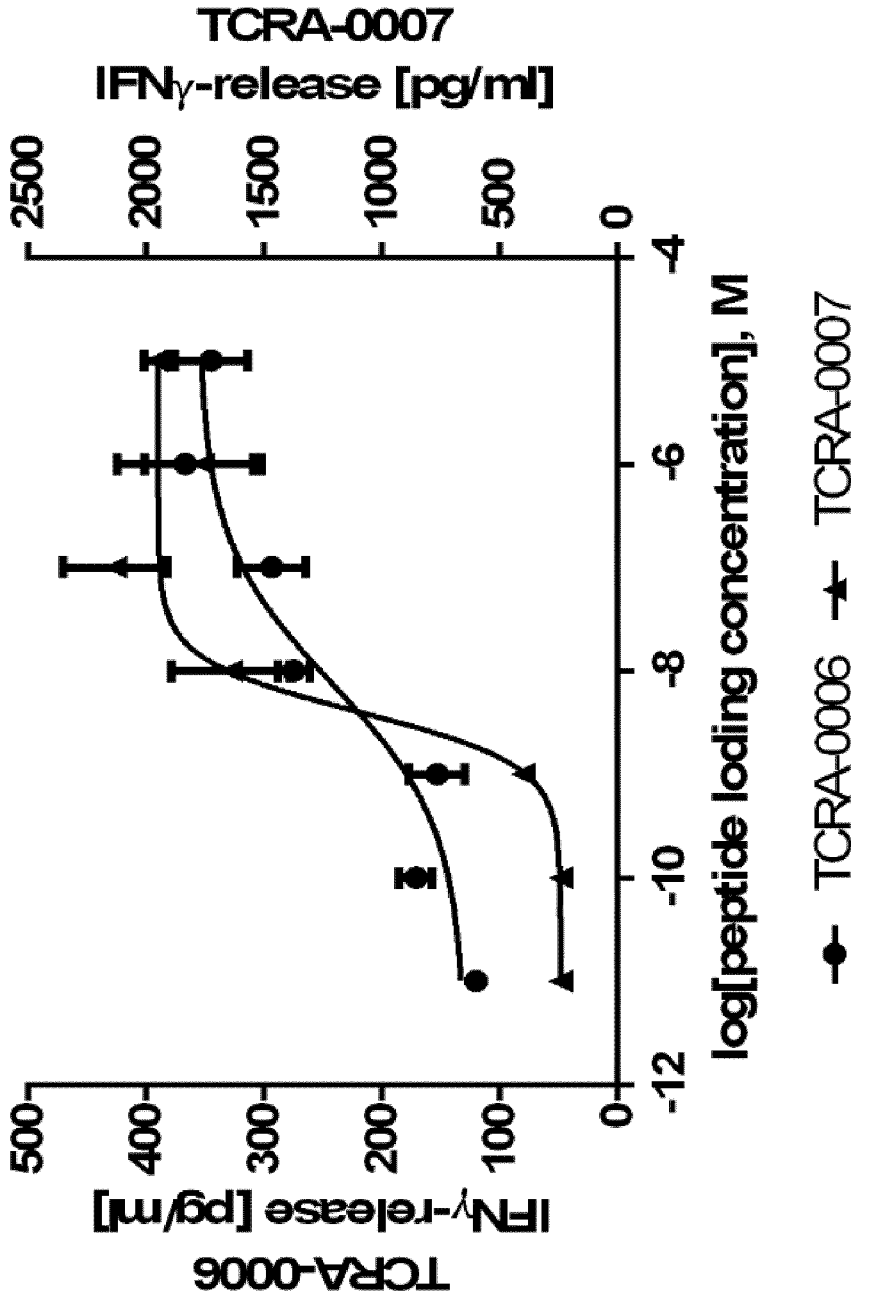

TCRA-0007
IFNγ-release [pg/ml]
2500
2000
1500
1000
500
0
-4
-6
-8
-10
-12
log[peptide loding concentration], M
TCRA-0006
TCRA-0007
TCRA-0006
IFNγ-release [pg/ml]
500
400
300
200
100
0

Figure 36:

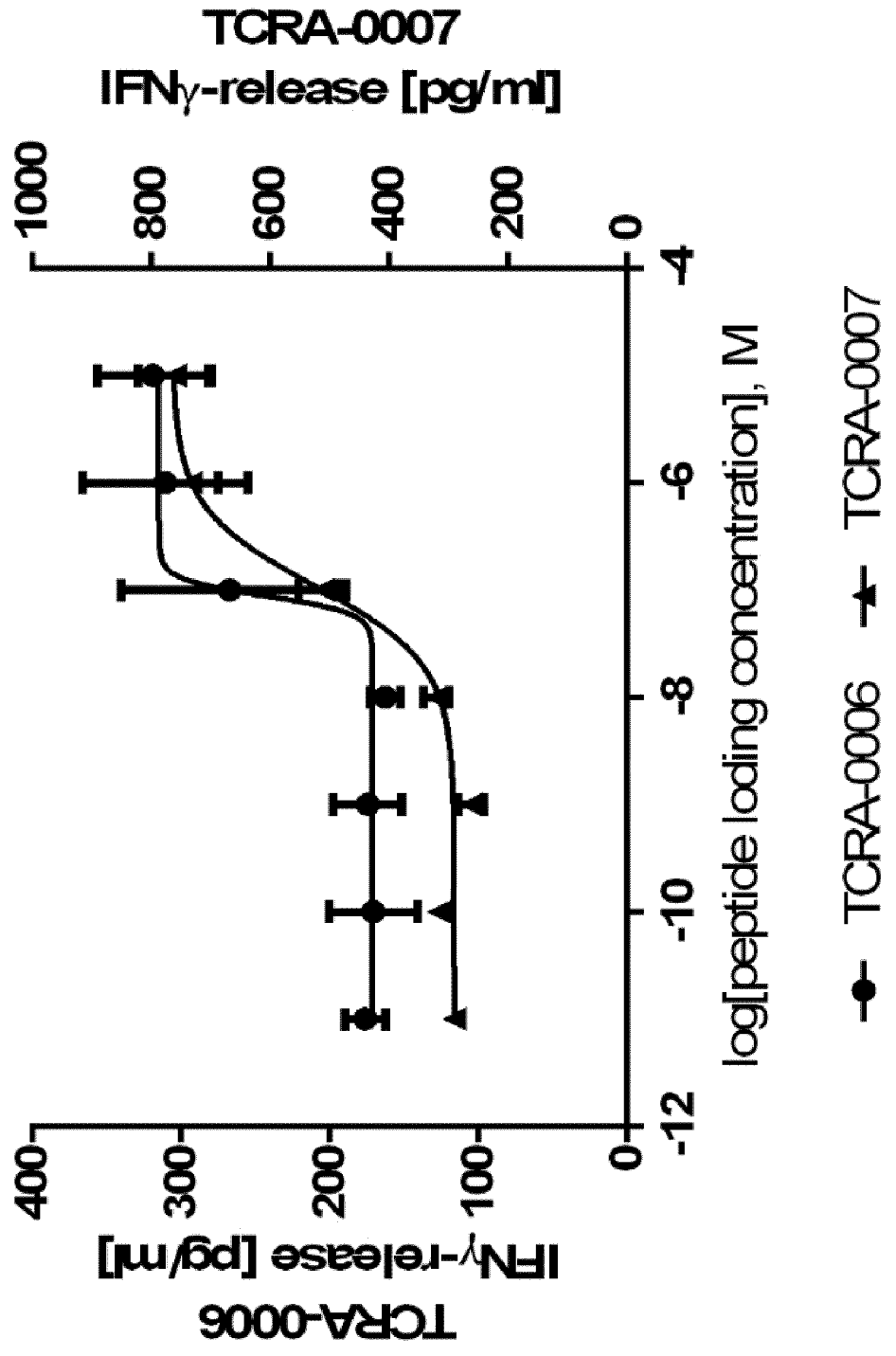

TCRA-0007
IFNγ-release [pg/ml]
1000
800
600
400
200
0
-4
-6
-8
-10
-12
log[peptide loding concentration], M
TCRA-0006
TCRA-0007
TCRA-0006
IFNγ-release [pg/ml]
400
300
200
100
0

Figure 37:

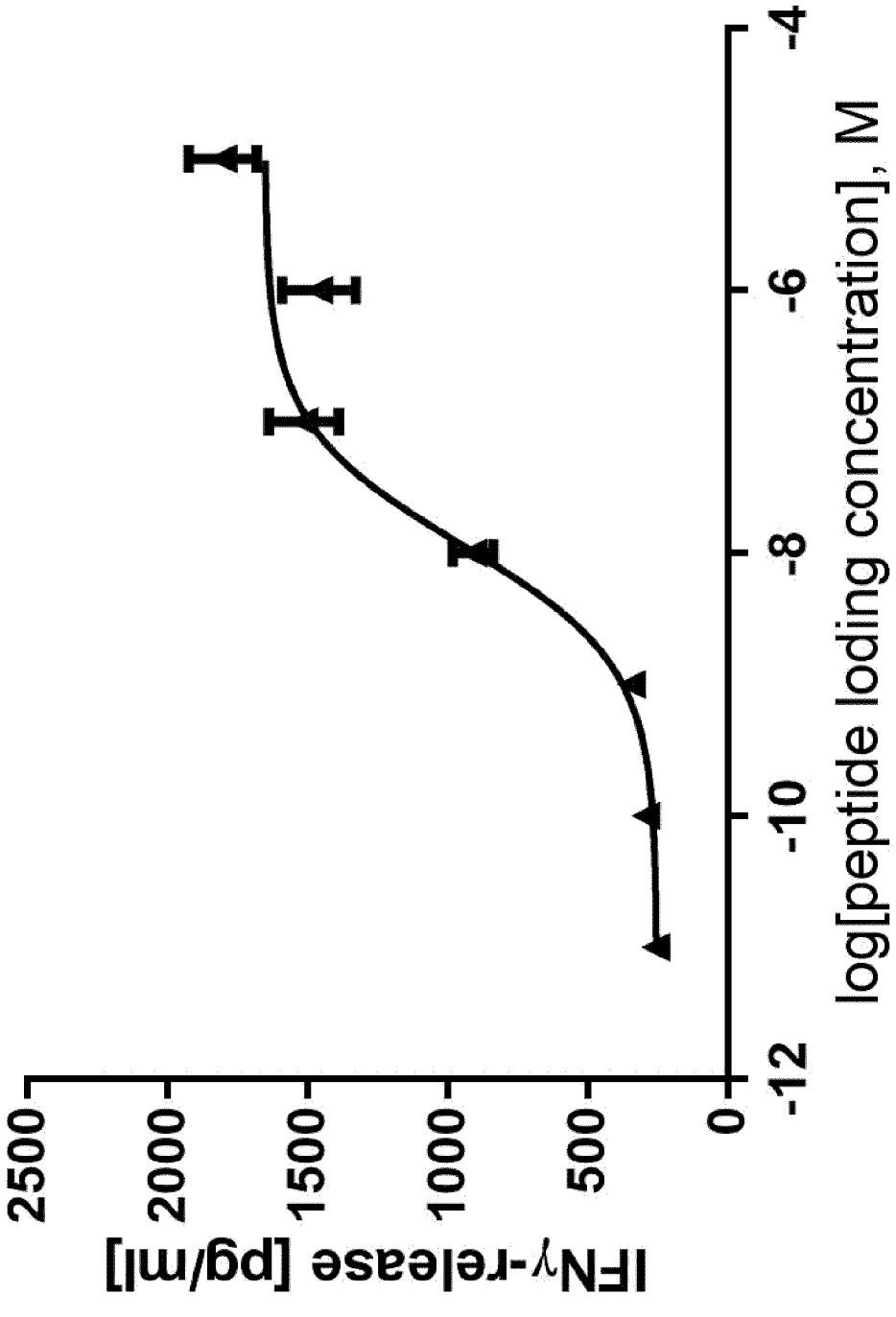

IFNγ-release [pg/ml]
2500
2000
1500
1000
500
0
-12
-10
-8
-6
-4
log[peptide loding concentration], M

Figure 38:

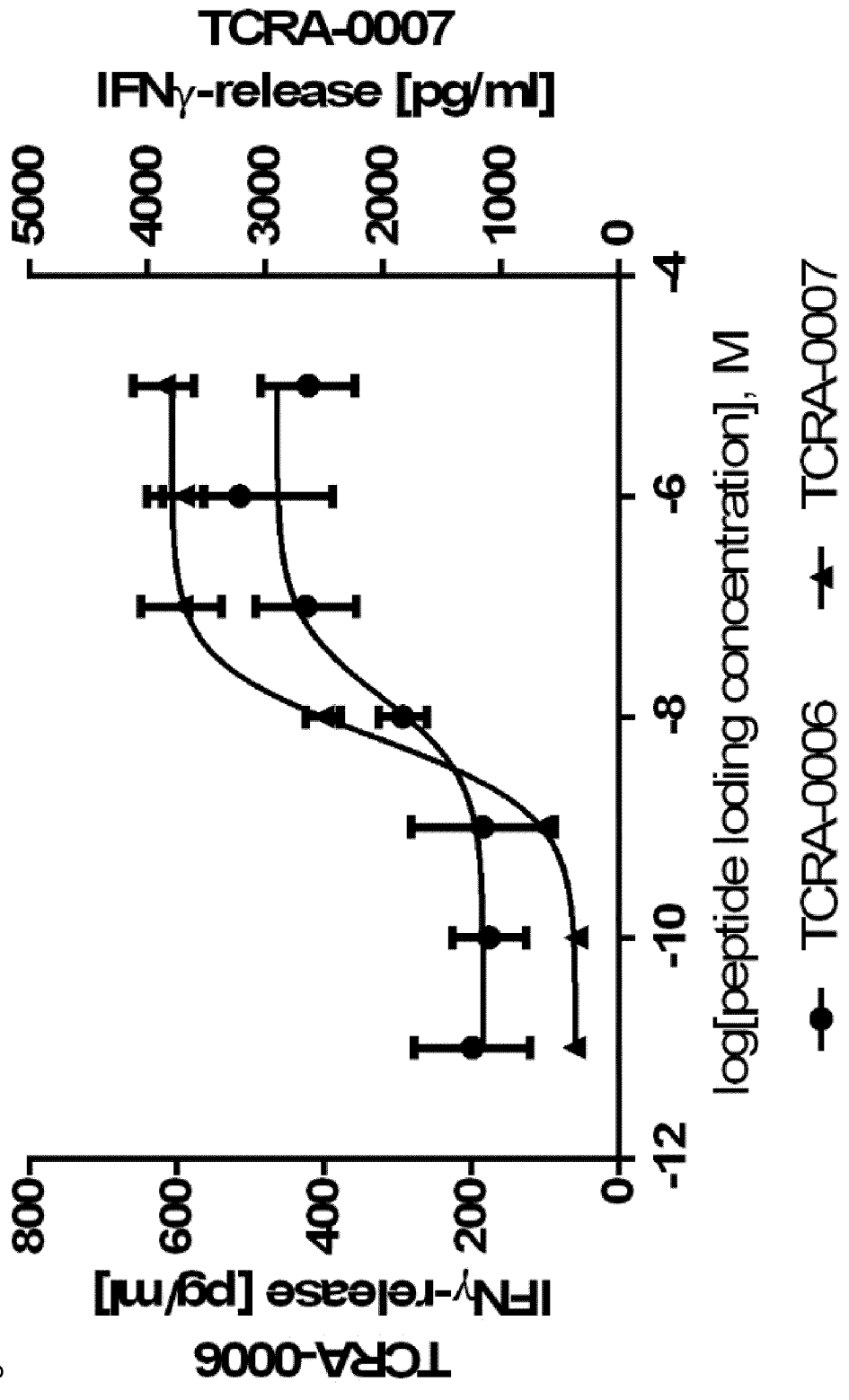

TCRA-0007
IFNγ-release [pg/ml]
5000
4000
3000
2000
1000
0
-4
-6
-8
-10
-12
log[peptide loding concentration], M
TCRA-0006
TCRA-0007
TCRA-0006
IFNγ-release [pg/ml]
800
600
400
200
0

Figure 39:

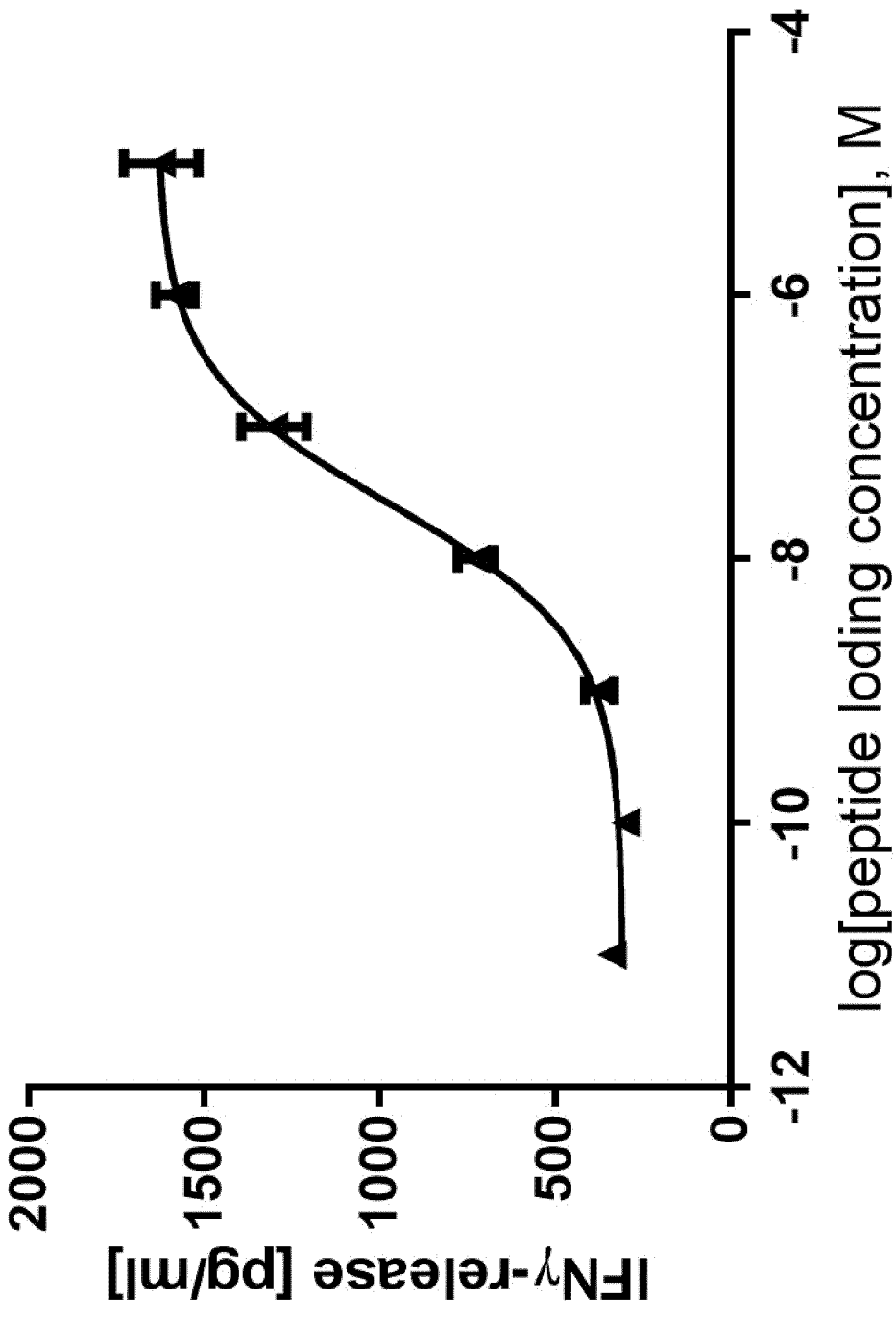

IFNγ-release [pg/ml]
2000
1500
1000
500
0
-12
-10
-8
-6
-4
log[peptide loding concentration], M

Figure 40:

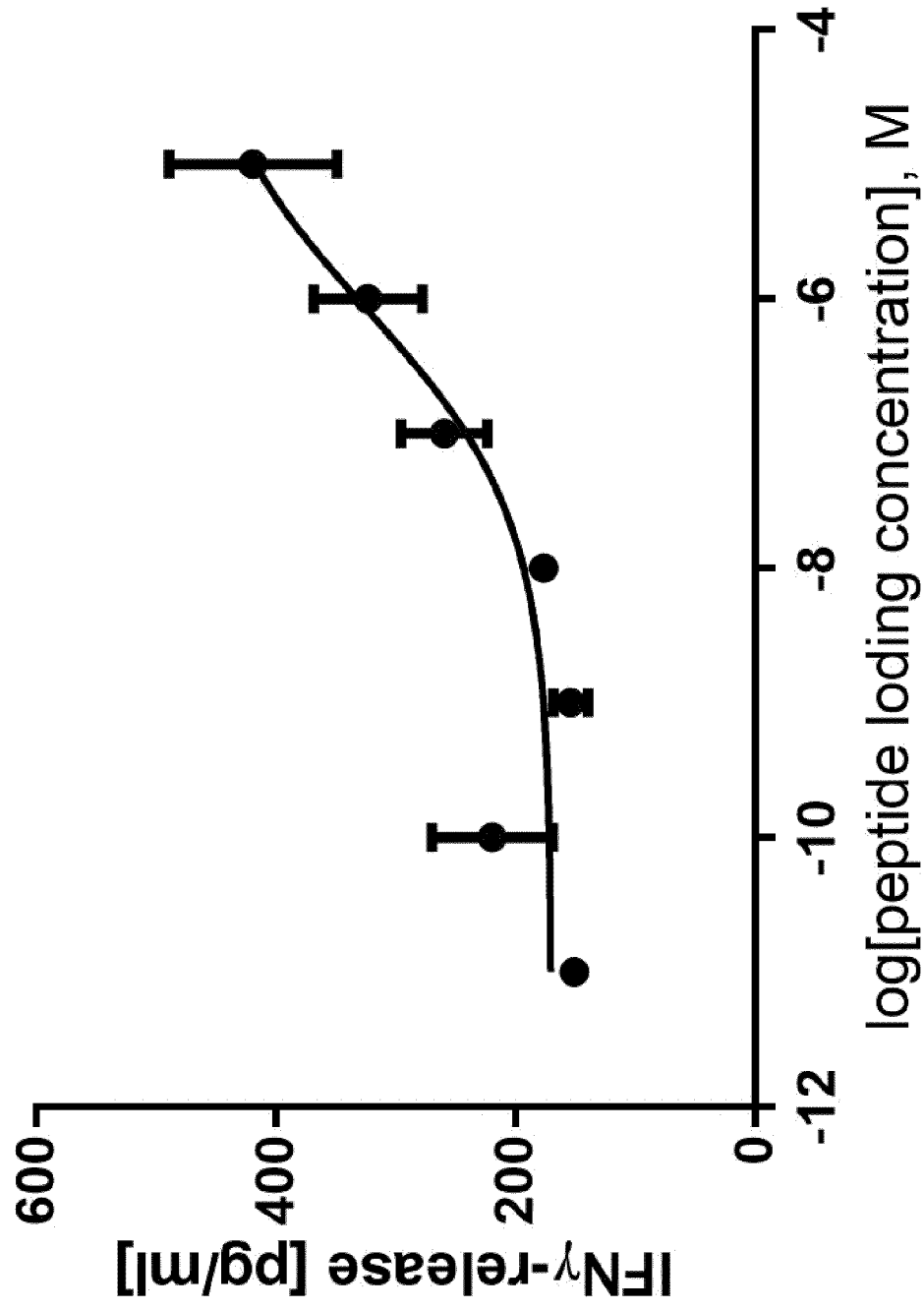

IFNγ-release [pg/ml]
600
400
200
0
-12
-10
-8
-6
-4
log[peptide loding concentration], M

Figure 41:

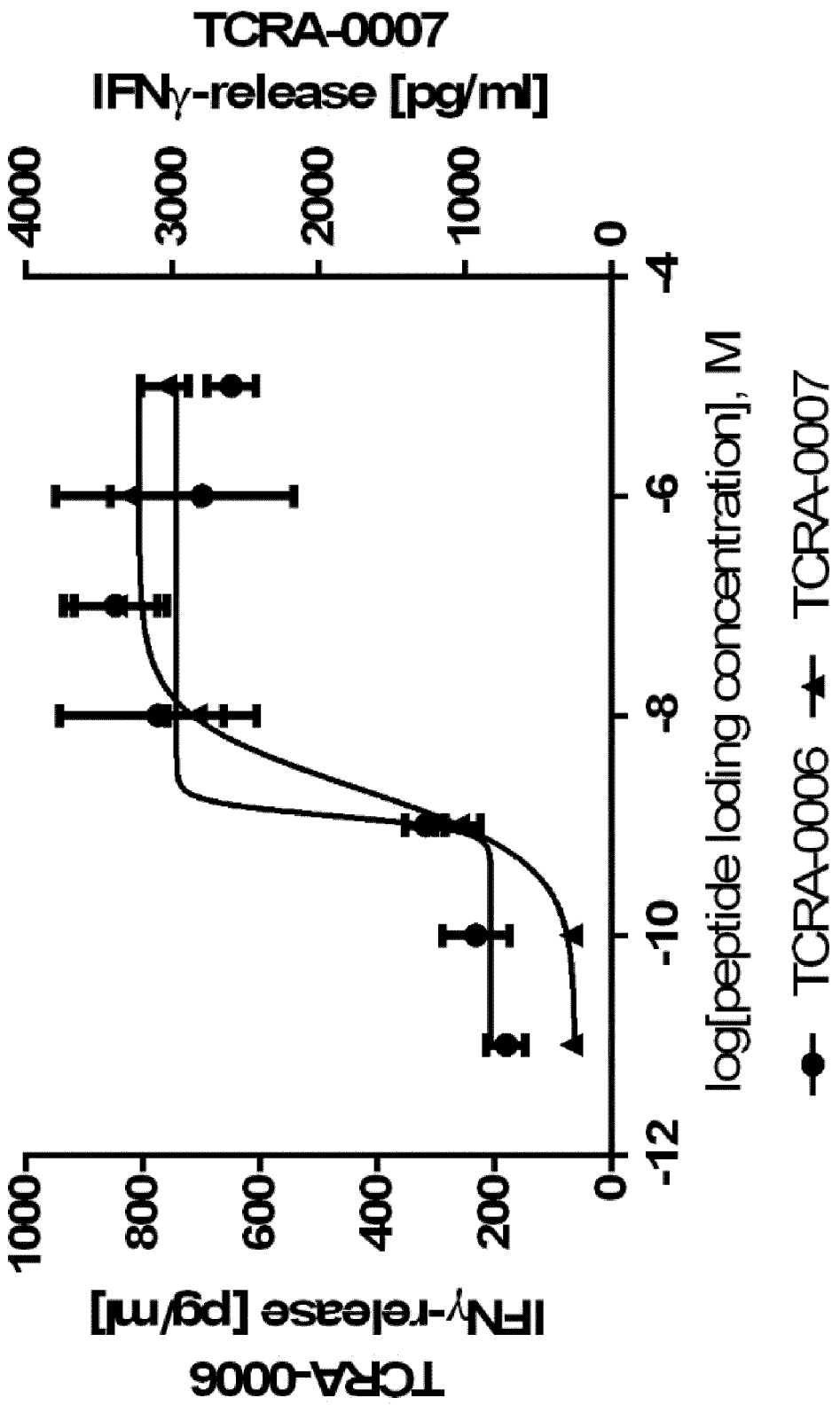

TCRA-0007
IFNγ-release [pg/ml]
4000
3000
2000
1000
0
-4
-6
-8
-10
-12
log[peptide loading concentration], M
TCRA-0006
TCRA-0007
TCRA-0006
IFNγ-release [pg/ml]
1000
800
600
400
200
0

Figure 42:

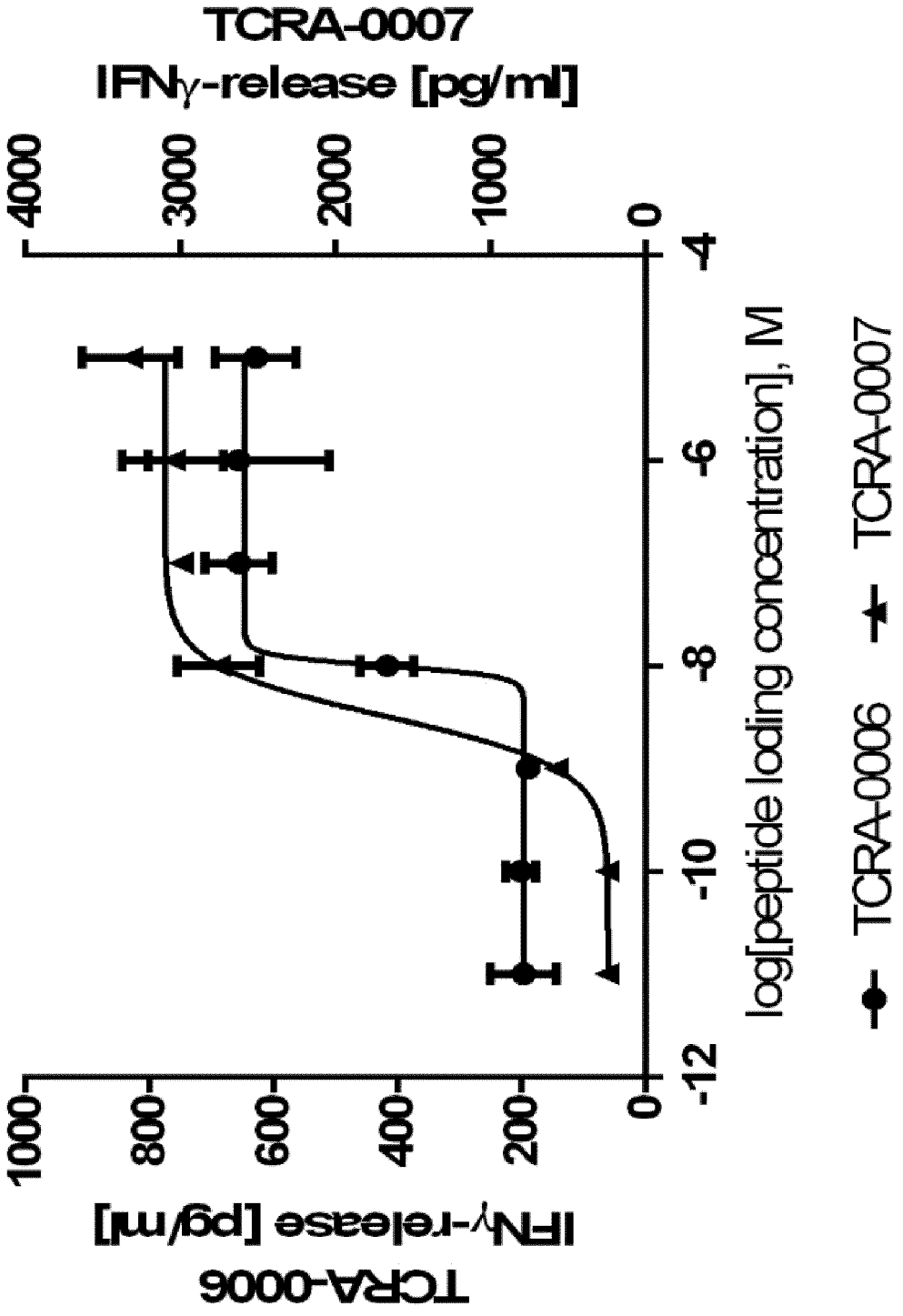

TCRA-0007
IFNγ-release [pg/ml]
4000
3000
2000
1000
0
-4
-6
-8
-10
-12
log[peptide loding concentration], M
TCRA-0006
TCRA-0007
TCRA-0006
IFNγ-release [pg/ml]
1000
800
600
400
200
0

Figure 43:

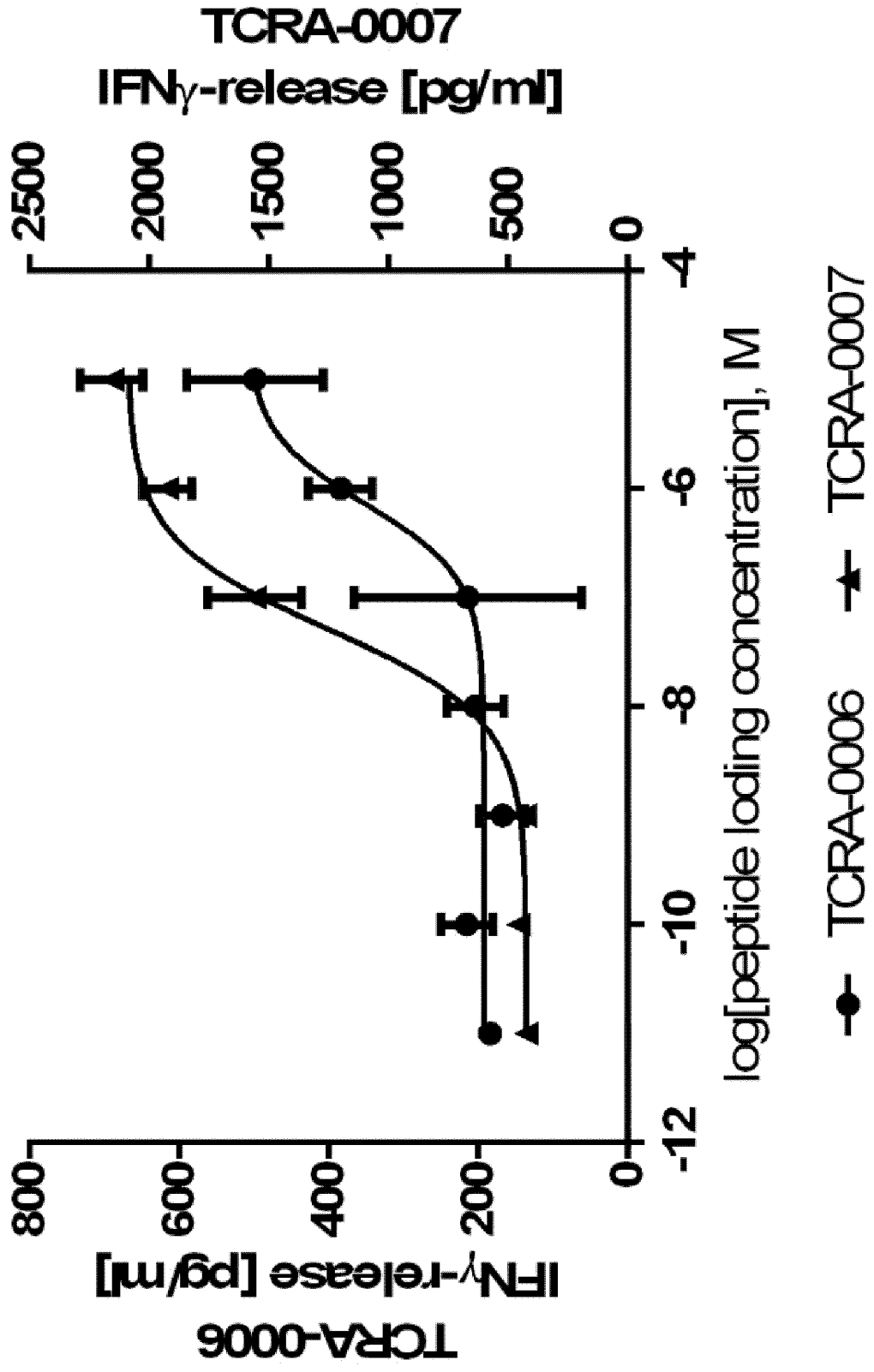

TCRA-0007
IFNγ-release [pg/ml]
2500
2000
1500
1000
500
0
-4
-6
-8
-10
-12
log[peptide loding concentration], M
TCRA-0006
TCRA-0007
TCRA-0006
IFNγ-release [pg/ml]
800
600
400
200
0

Figure 44: