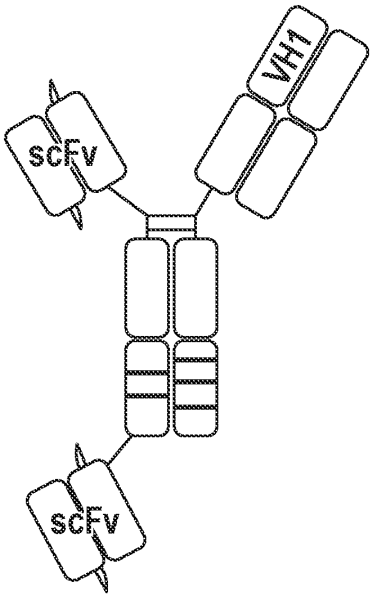


FIG. 1A

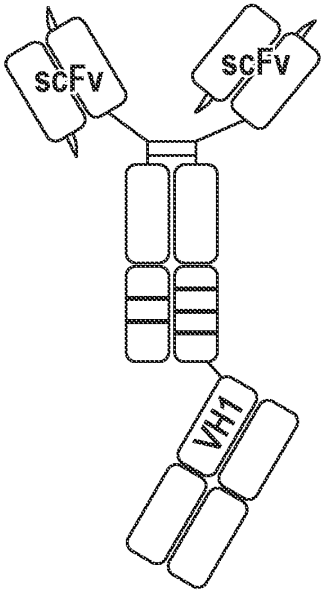


FIG. 1B

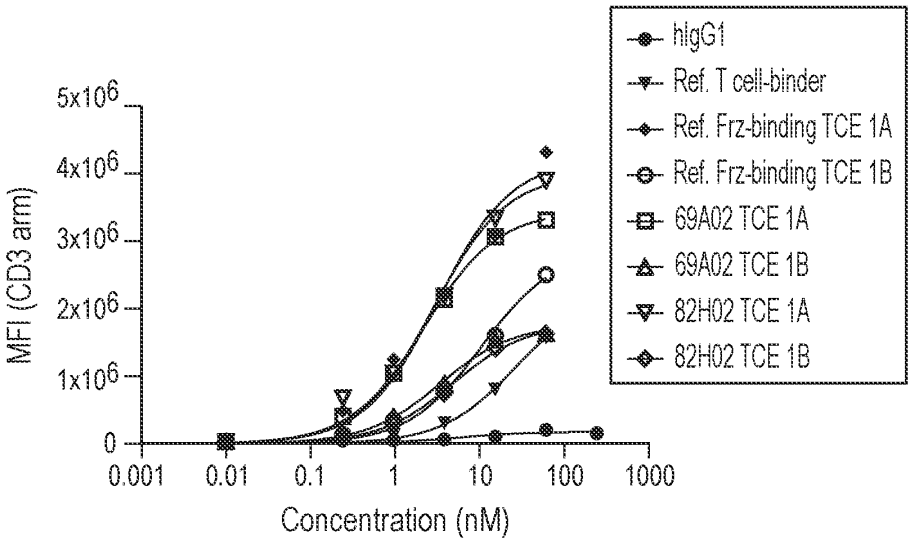

hIgG1
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B
MFI (CD3 arm)
5x10^6
4x10^6
3x10^6
2x10^6
1x10^6
0
0.001
0.01
0.1
1
10
100
1000
Concentration (nM)

FIG. 2A

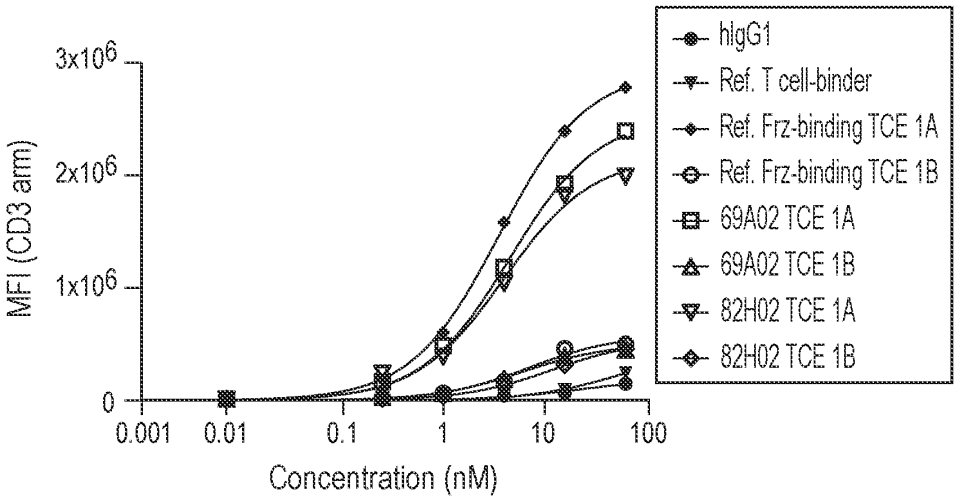

hIgG1
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B
MFI (CD3 arm)
3x10^6
2x10^6
1x10^6
0
0.001
0.01
0.1
1
10
100
Concentration (nM)

FIG. 2B

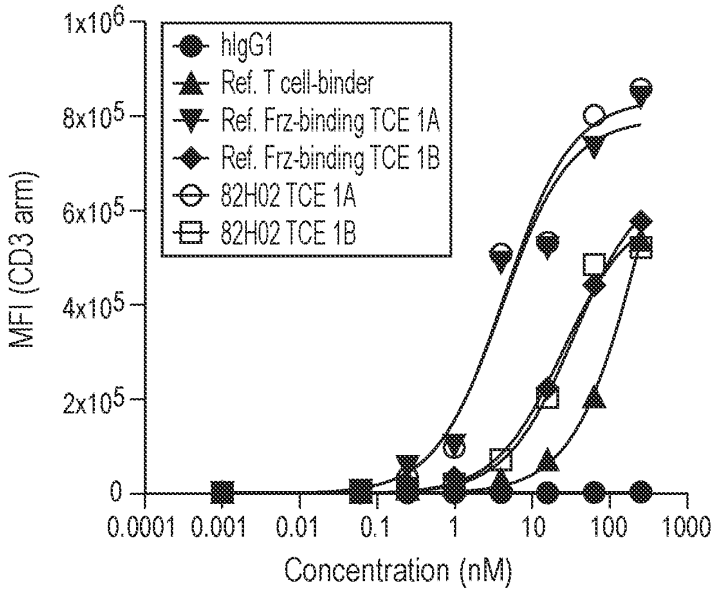

1x10^6
8x10^5
6x10^5
4x10^5
2x10^5
0
MFI (CD3 arm)
hIgG1
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B
0.0001
0.001
0.01
0.1
1
10
100
1000
Concentration (nM)

FIG. 2C

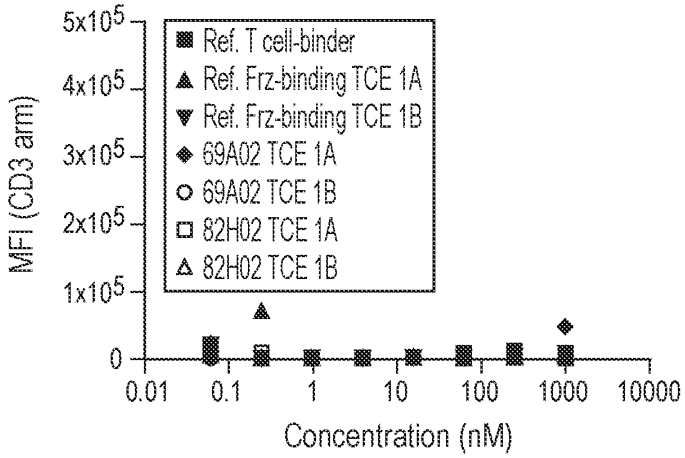

5x10^5
4x10^5
3x10^5
2x10^5
1x10^5
0
MFI (CD3 arm)
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B
0.01
0.1
1
10
100
1000
10000
Concentration (nM)

FIG. 2D

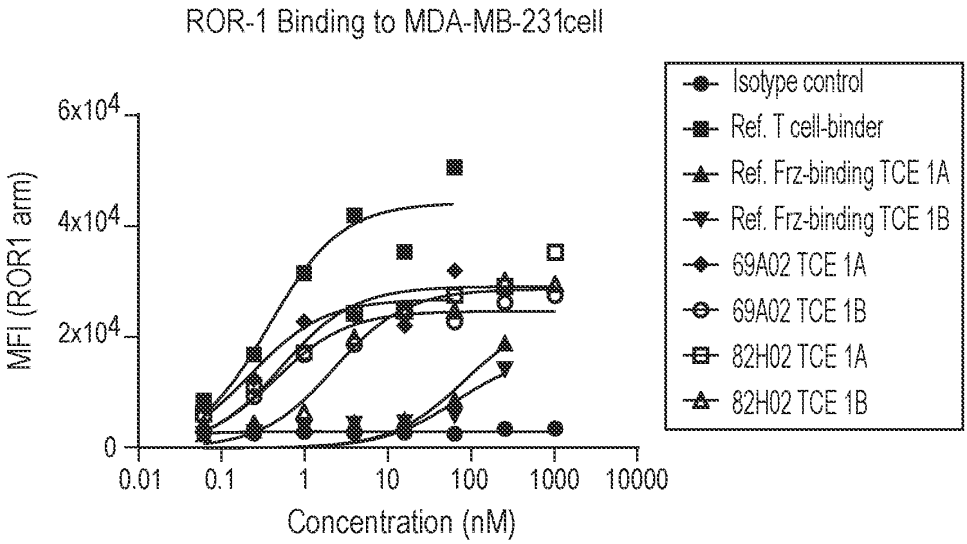

ROR-1 Binding to MDA-MB-231cell
MFI (ROR1 arm)
6x10^4
4x10^4
2x10^4
0
0.01
0.1
1
10
100
1000
10000
Concentration (nM)
Isotype control
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 3A

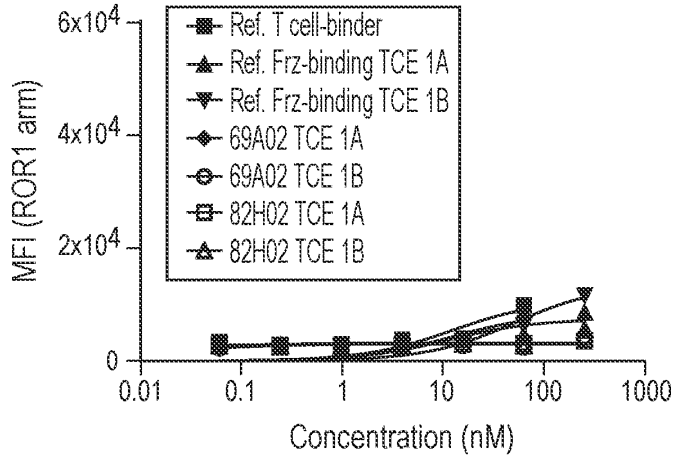

MFI (ROR1 arm)
6x10^4
4x10^4
2x10^4
0
0.01
0.1
1
10
100
1000
Concentration (nM)
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 3B

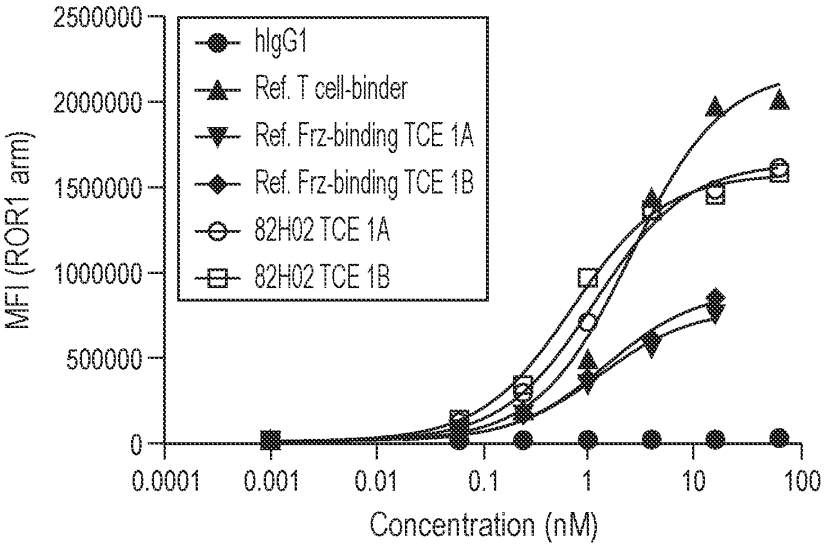

2500000
2000000
1500000
1000000
500000
0
MFI (ROR1 arm)
hIgG1
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B
0.0001
0.001
0.01
0.1
1
10
100
Concentration (nM)

FIG. 3C

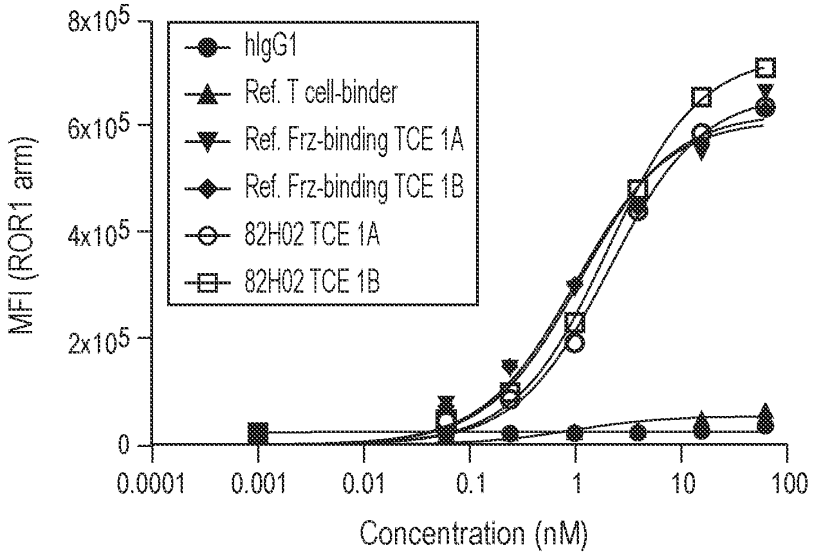

8x10^5
6x10^5
4x10^5
2x10^5
0
MFI (ROR1 arm)
hIgG1
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B
0.0001
0.001
0.01
0.1
1
10
100
Concentration (nM)

FIG. 3D

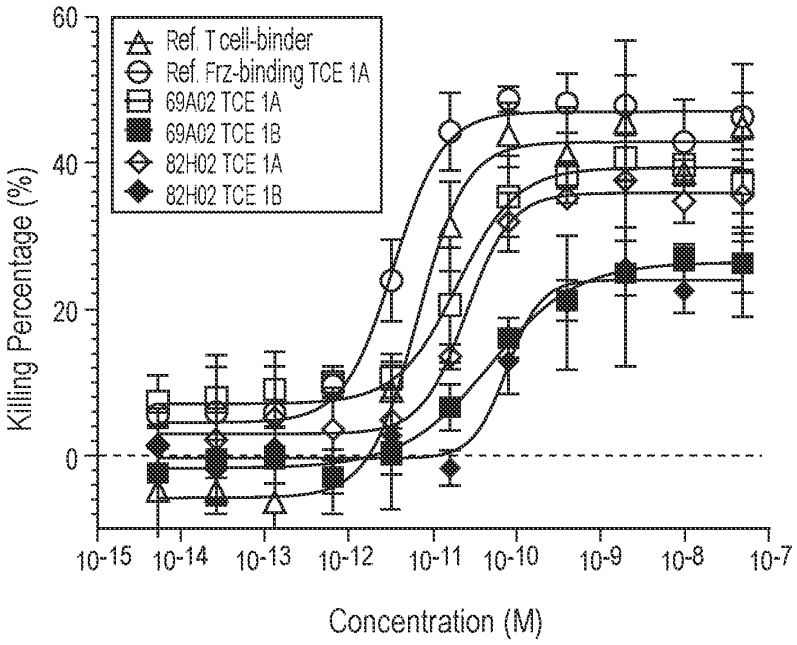

Ref. T cell-binder
Ref. Frz-binding TCE 1A
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B
Killing Percentage (%)
60
40
20
0
10-15
10-14
10-13
10-12
10-11
10-10
10-9
10-8
10-7
Concentration (M)

FIG. 4A

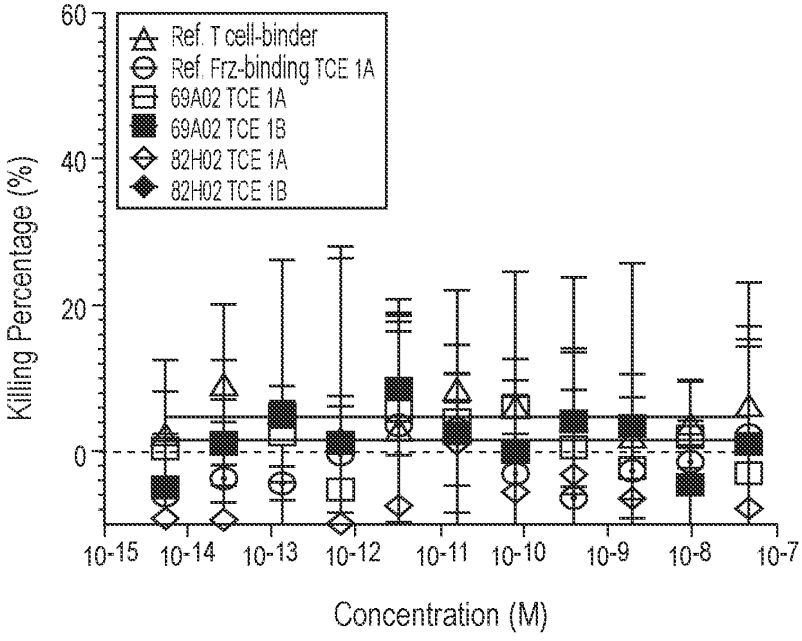

Ref. T cell-binder
Ref. Frz-binding TCE 1A
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B
Killing Percentage (%)
60
40
20
0
10-15
10-14
10-13
10-12
10-11
10-10
10-9
10-8
10-7
Concentration (M)

FIG. 4B

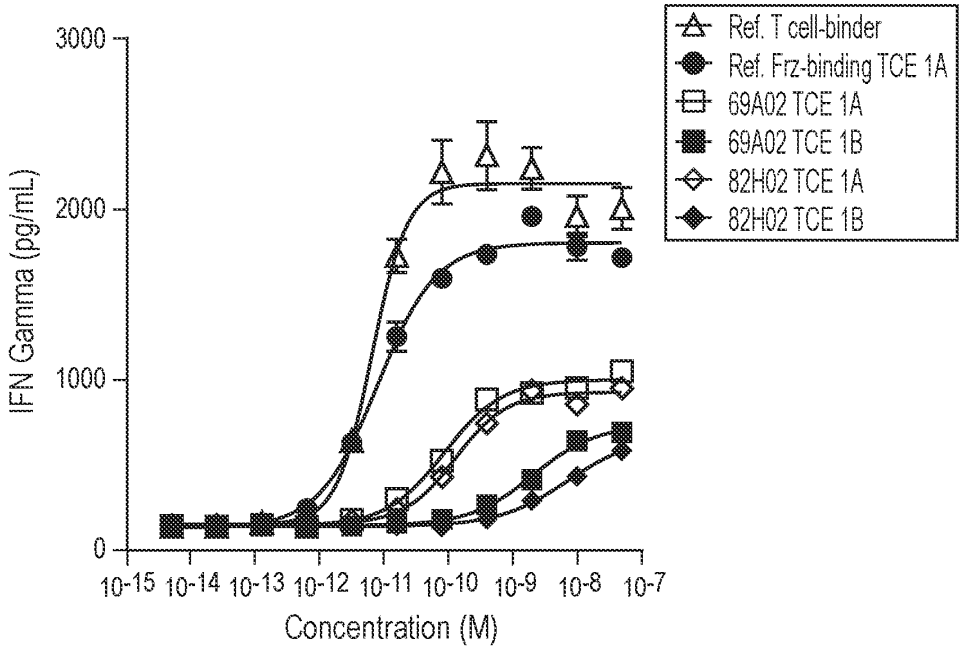

Ref. T cell-binder
Ref. Frz-binding TCE 1A
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B
IFN Gamma (pg/mL)
3000
2000
1000
0
10-15 10-14 10-13 10-12 10-11 10-10 10-9 10-8 10-7
Concentration (M)

FIG. 4C

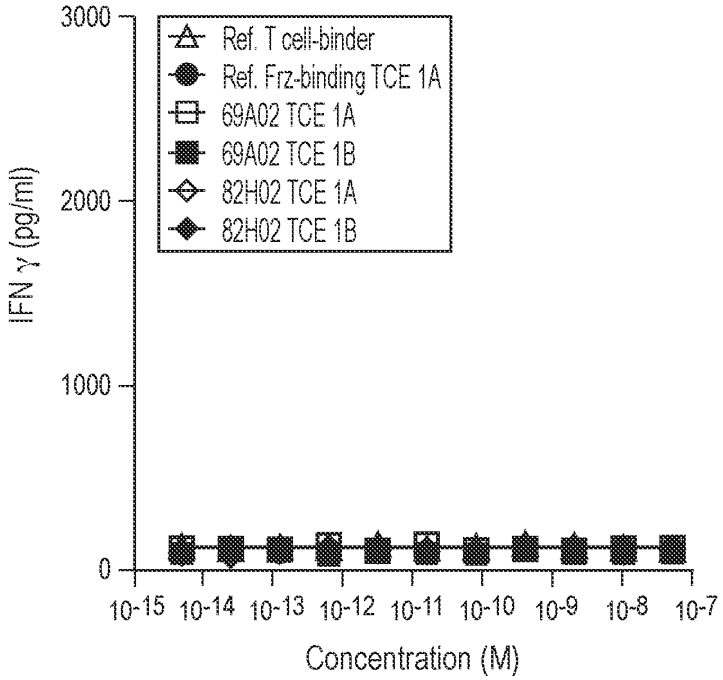

Ref. T cell-binder
Ref. Frz-binding TCE 1A
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B
IFN γ (pg/ml)
3000
2000
1000
0
10-15 10-14 10-13 10-12 10-11 10-10 10-9 10-8 10-7
Concentration (M)

FIG. 4D

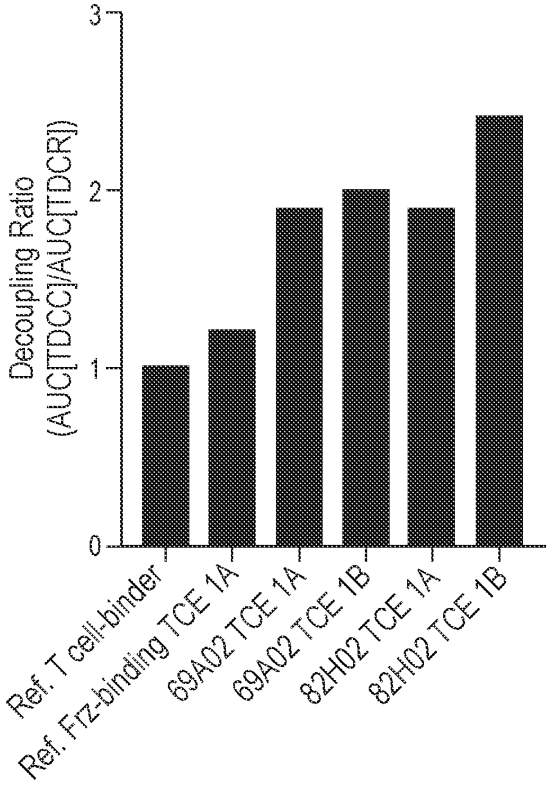

Decoupling Ratio
(AUC[TDCC]/AUC[TDCR])
3
2
1
0
Ref. T cell-binder
Ref. Frz-binding TCE 1A
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 4E

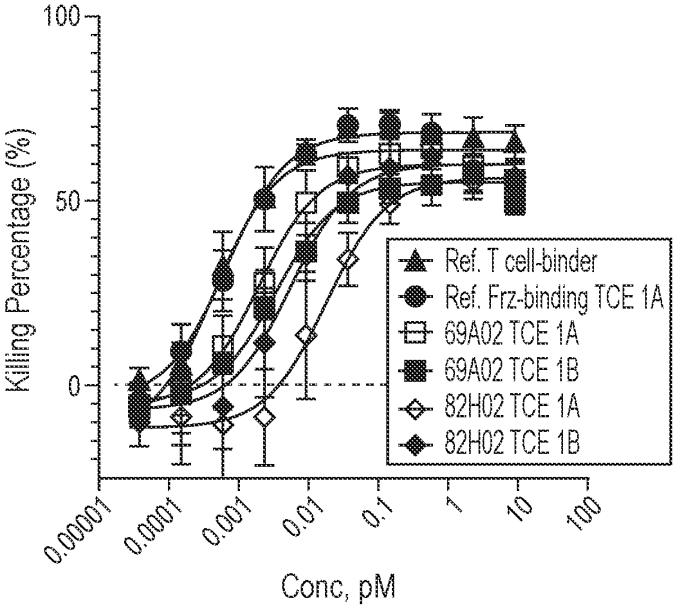

100
50
0
Killing Percentage (%)
0.00001
0.0001
0.001
0.01
0.1
1
10
100
Conc, pM
Ref. T cell-binder
Ref. Frz-binding TCE 1A
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 5A

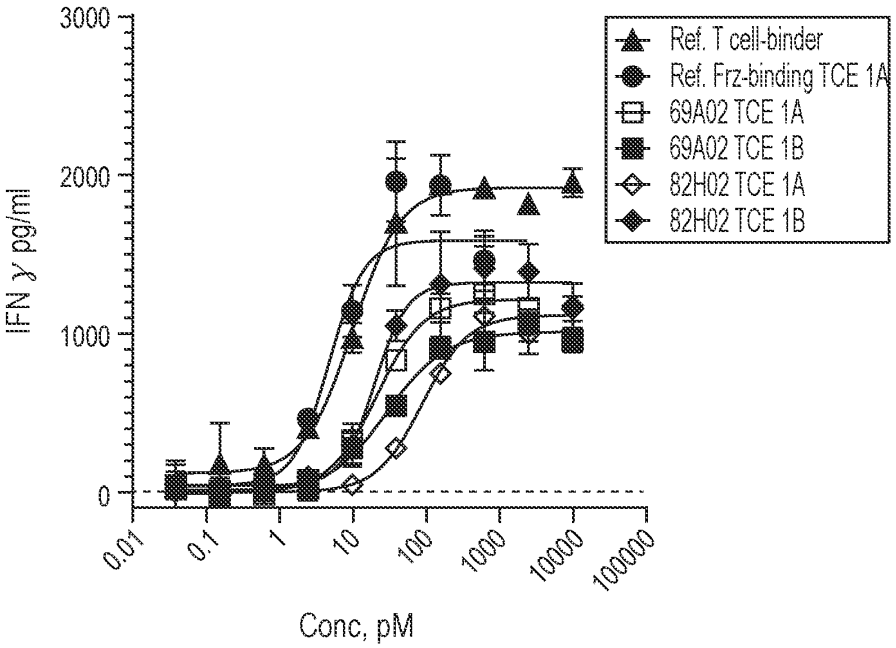

3000
2000
1000
0
IFN γ pg/ml
0.01
0.1
1
10
100
1000
10000
100000
Conc, pM
Ref. T cell-binder
Ref. Frz-binding TCE 1A
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 5B

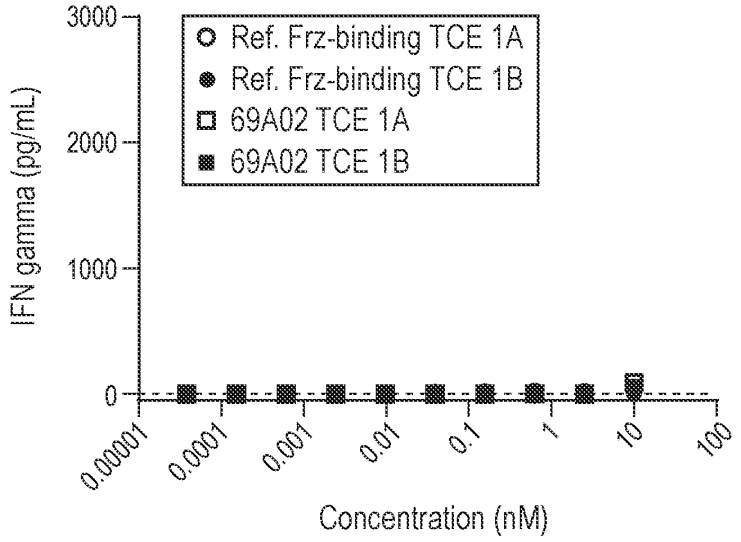

3000
2000
1000
0
IFN gamma (pg/mL)
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
0.00001
0.0001
0.001
0.01
0.1
1
10
100
Concentration (nM)

FIG. 5C

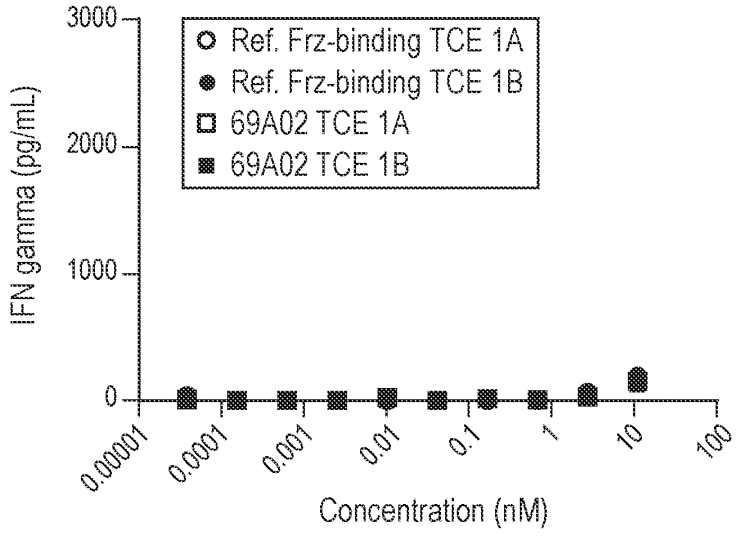

3000
2000
1000
0
IFN gamma (pg/mL)
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
0.00001
0.0001
0.001
0.01
0.1
1
10
100
Concentration (nM)

FIG. 5D

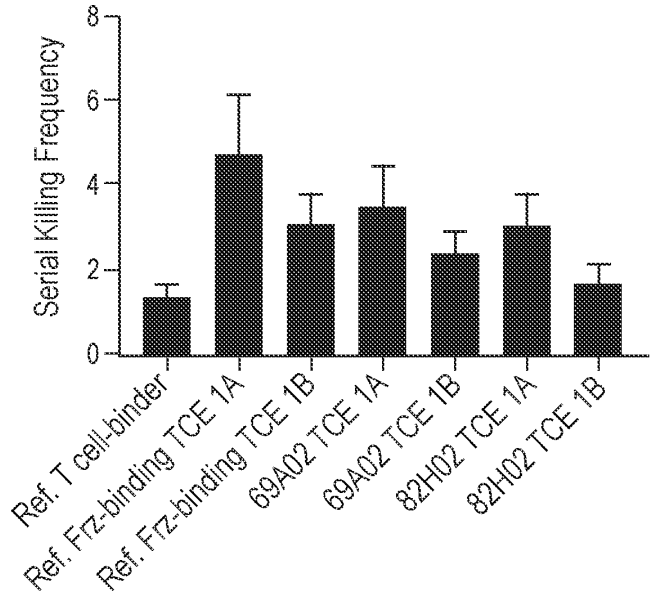

Serial Killing Frequency
0
2
4
6
8
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 6A

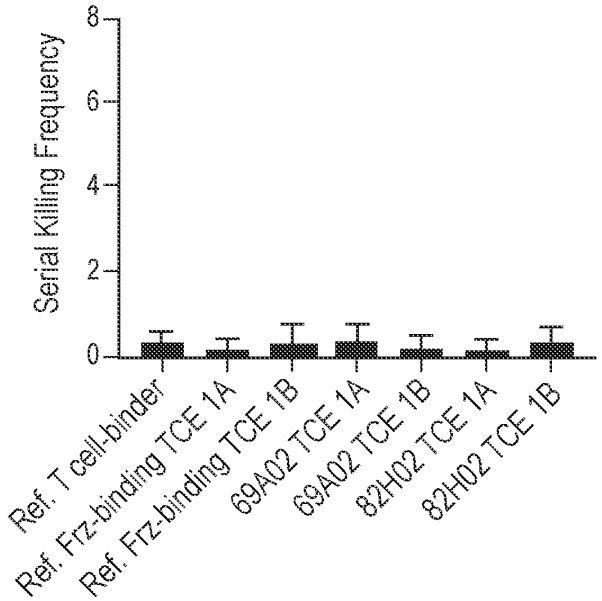

Serial Killing Frequency
0
2
4
6
8
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
69A02 TCE 1A
69A02 TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 6B

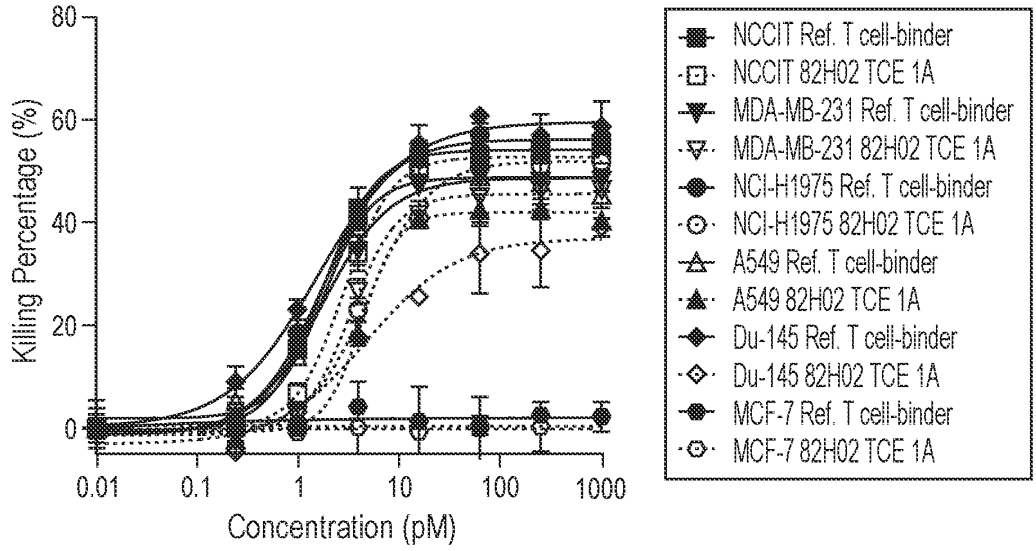

Killing Percentage (%)
80
60
40
20
0
0.01
0.1
1
10
100
1000
Concentration (pM)
NCCIT Ref. T cell-binder
NCCIT 82H02 TCE 1A
MDA-MB-231 Ref. T cell-binder
MDA-MB-231 82H02 TCE 1A
NCI-H1975 Ref. T cell-binder
NCI-H1975 82H02 TCE 1A
A549 Ref. T cell-binder
A549 82H02 TCE 1A
Du-145 Ref. T cell-binder
Du-145 82H02 TCE 1A
MCF-7 Ref. T cell-binder
MCF-7 82H02 TCE 1A

FIG. 7A

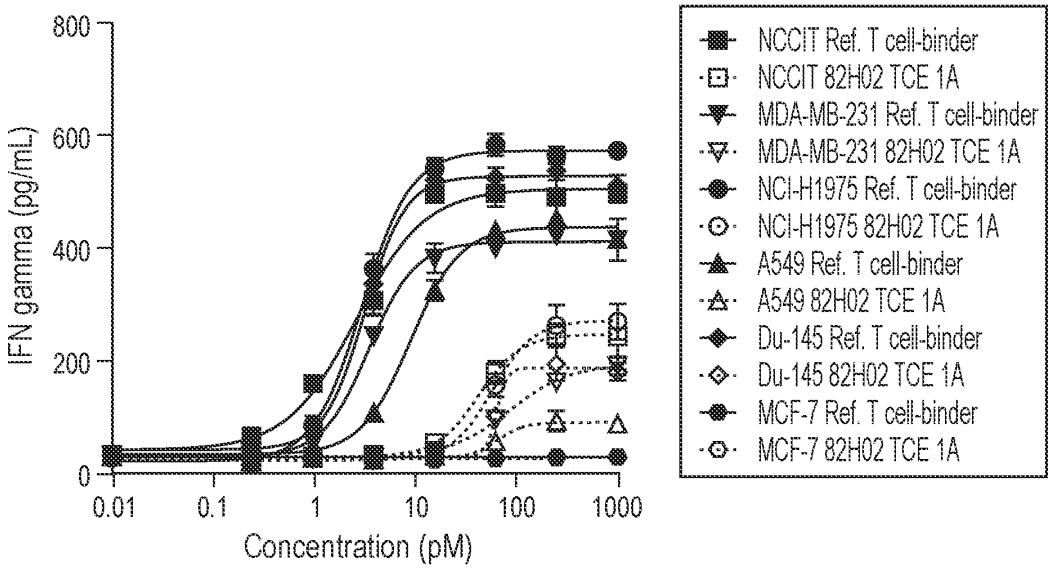

IFN gamma (pg/mL)
800
600
400
200
0
0.01
0.1
1
10
100
1000
Concentration (pM)
NCCIT Ref. T cell-binder
NCCIT 82H02 TCE 1A
MDA-MB-231 Ref. T cell-binder
MDA-MB-231 82H02 TCE 1A
NCI-H1975 Ref. T cell-binder
NCI-H1975 82H02 TCE 1A
A549 Ref. T cell-binder
A549 82H02 TCE 1A
Du-145 Ref. T cell-binder
Du-145 82H02 TCE 1A
MCF-7 Ref. T cell-binder
MCF-7 82H02 TCE 1A

FIG. 7B

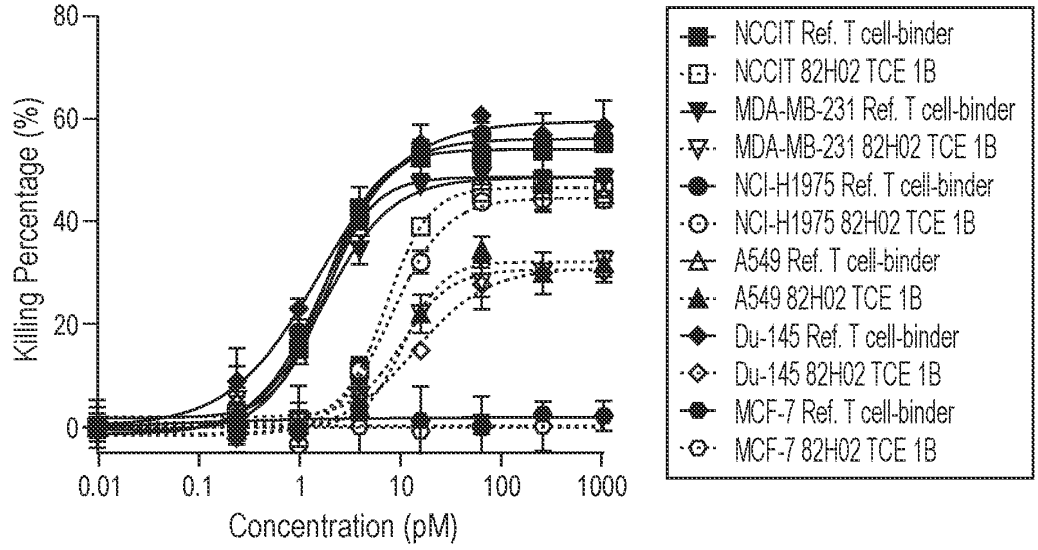

Killing Percentage (%)
80
60
40
20
0
0.01
0.1
1
10
100
1000
Concentration (pM)
NCCIT Ref. T cell-binder
NCCIT 82H02 TCE 1B
MDA-MB-231 Ref. T cell-binder
MDA-MB-231 82H02 TCE 1B
NCI-H1975 Ref. T cell-binder
NCI-H1975 82H02 TCE 1B
A549 Ref. T cell-binder
A549 82H02 TCE 1B
Du-145 Ref. T cell-binder
Du-145 82H02 TCE 1B
MCF-7 Ref. T cell-binder
MCF-7 82H02 TCE 1B

FIG. 7C

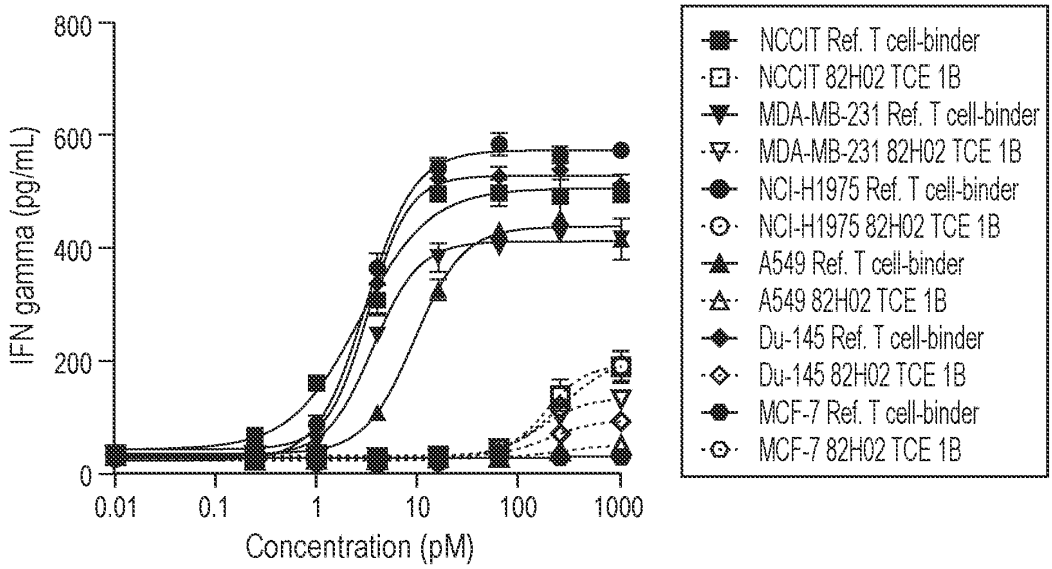

IFN gamma (pg/mL)
800
600
400
200
0
0.01
0.1
1
10
100
1000
Concentration (pM)
NCCIT Ref. T cell-binder
NCCIT 82H02 TCE 1B
MDA-MB-231 Ref. T cell-binder
MDA-MB-231 82H02 TCE 1B
NCI-H1975 Ref. T cell-binder
NCI-H1975 82H02 TCE 1B
A549 Ref. T cell-binder
A549 82H02 TCE 1B
Du-145 Ref. T cell-binder
Du-145 82H02 TCE 1B
MCF-7 Ref. T cell-binder
MCF-7 82H02 TCE 1B

FIG. 7D

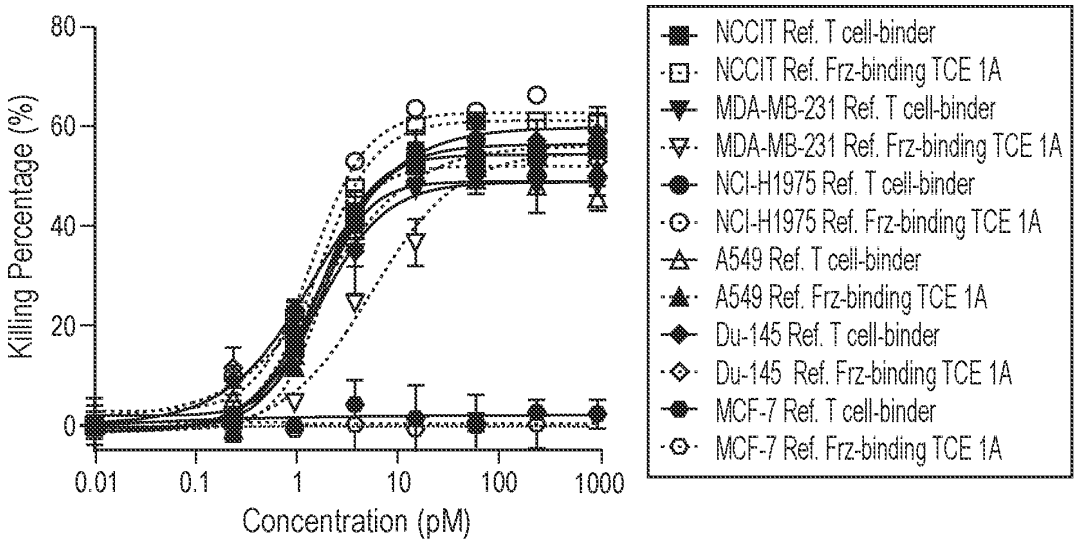

Killing Percentage (%)
80
60
40
20
0
0.01
0.1
1
10
100
1000
Concentration (pM)
NCCIT Ref. T cell-binder
NCCIT Ref. Frz-binding TCE 1A
MDA-MB-231 Ref. T cell-binder
MDA-MB-231 Ref. Frz-binding TCE 1A
NCI-H1975 Ref. T cell-binder
NCI-H1975 Ref. Frz-binding TCE 1A
A549 Ref. T cell-binder
A549 Ref. Frz-binding TCE 1A
Du-145 Ref. T cell-binder
Du-145 Ref. Frz-binding TCE 1A
MCF-7 Ref. T cell-binder
MCF-7 Ref. Frz-binding TCE 1A

FIG. 7E

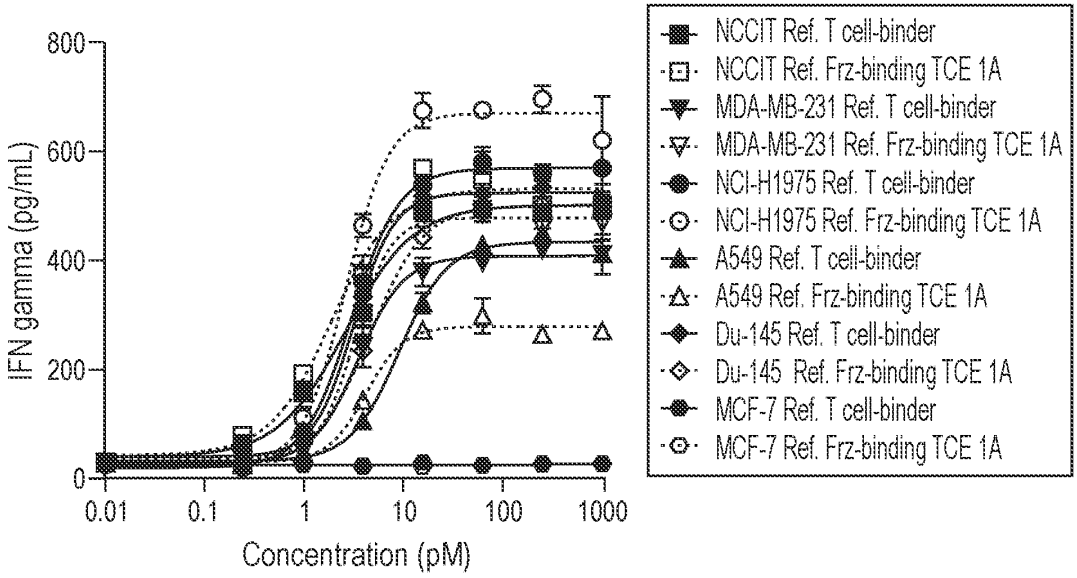

IFN gamma (pg/mL)
800
600
400
200
0
0.01
0.1
1
10
100
1000
Concentration (pM)
NCCIT Ref. T cell-binder
NCCIT Ref. Frz-binding TCE 1A
MDA-MB-231 Ref. T cell-binder
MDA-MB-231 Ref. Frz-binding TCE 1A
NCI-H1975 Ref. T cell-binder
NCI-H1975 Ref. Frz-binding TCE 1A
A549 Ref. T cell-binder
A549 Ref. Frz-binding TCE 1A
Du-145 Ref. T cell-binder
Du-145 Ref. Frz-binding TCE 1A
MCF-7 Ref. T cell-binder
MCF-7 Ref. Frz-binding TCE 1A

FIG. 7F

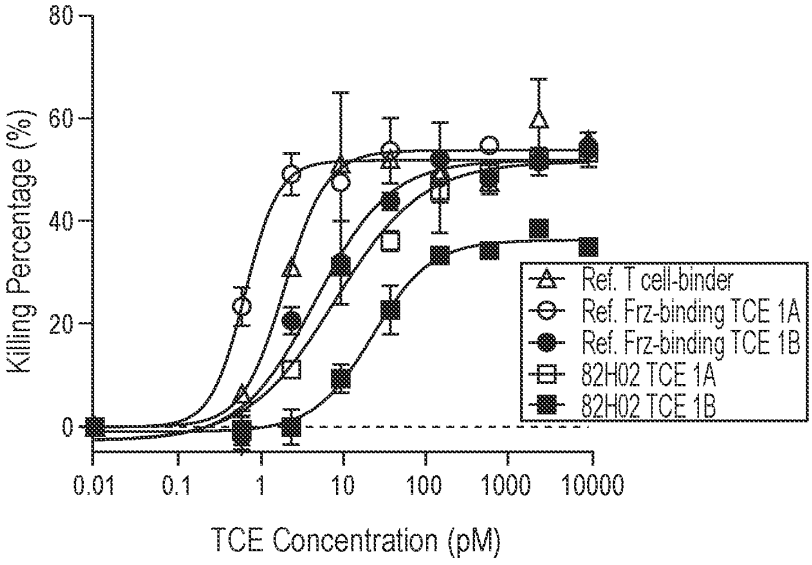

Killing Percentage (%)
80
60
40
20
0
0.01
0.1
1
10
100
1000
10000
TCE Concentration (pM)
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 8A

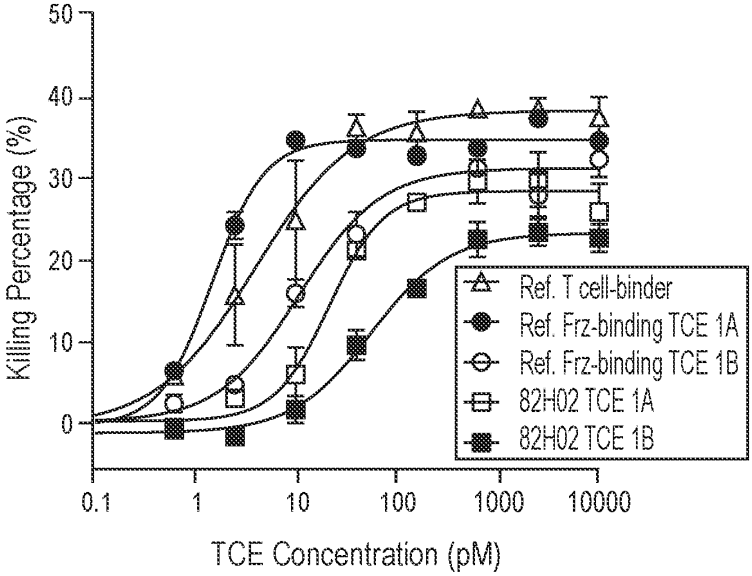

Killing Percentage (%)
50
40
30
20
10
0
0.1
1
10
100
1000
10000
TCE Concentration (pM)
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 8B

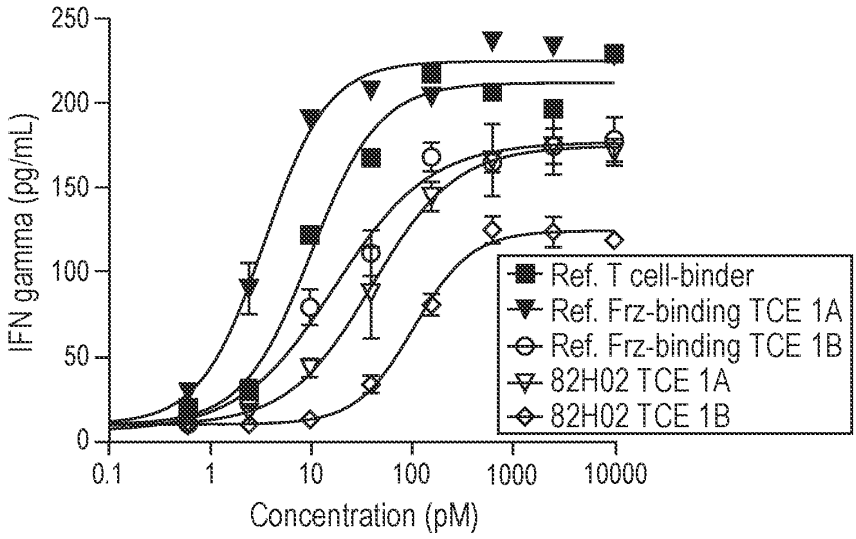

IFN gamma (pg/mL)
250
200
150
100
50
0
0.1
1
10
100
1000
10000
Concentration (pM)
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 8C

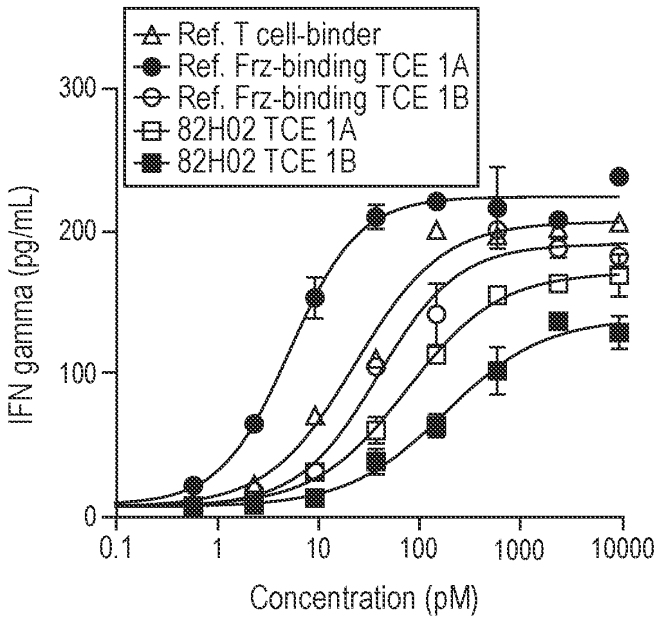

IFN gamma (pg/mL)
300
200
100
0
0.1
1
10
100
1000
10000
Concentration (pM)
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 8D

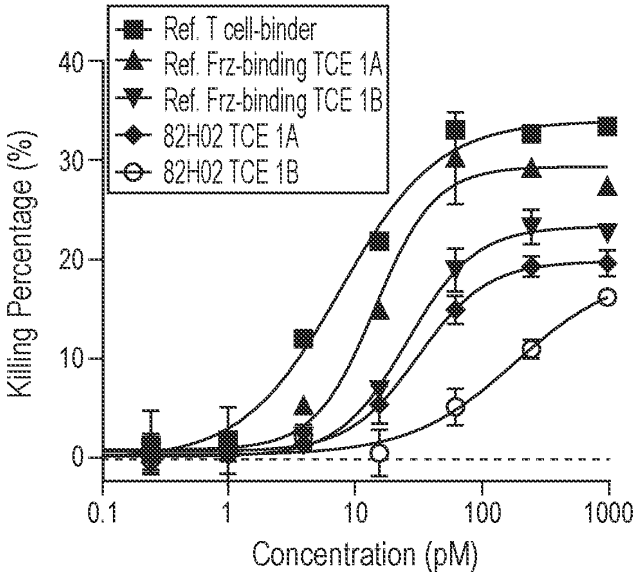

Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B
Killing Percentage (%)
40
30
20
10
0
0.1
1
10
100
1000
Concentration (pM)

FIG. 9A

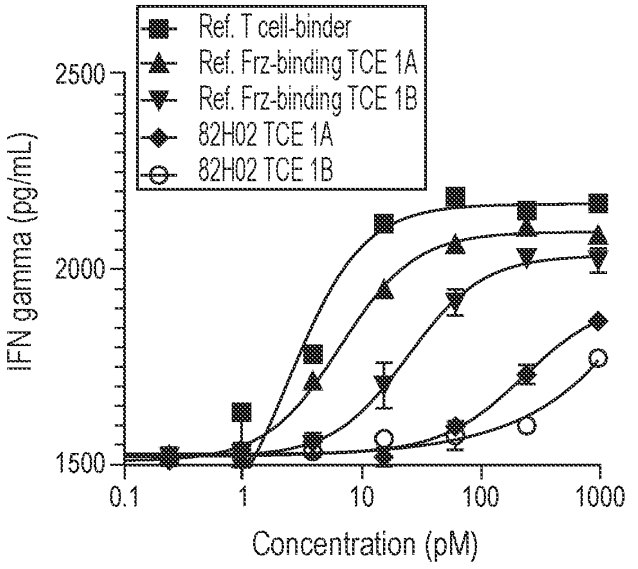

Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B
IFN gamma (pg/mL)
2500
2000
1500
0.1
1
10
100
1000
Concentration (pM)

FIG. 9B

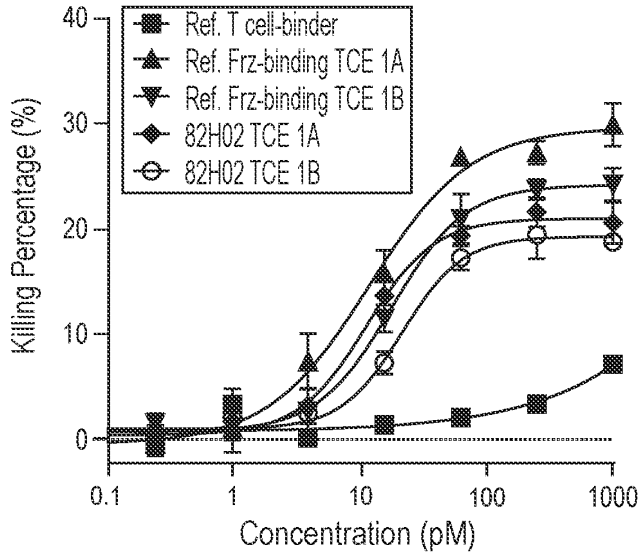

Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B
Killing Percentage (%)
40
30
20
10
0
0.1
1
10
100
1000
Concentration (pM)

FIG. 9C

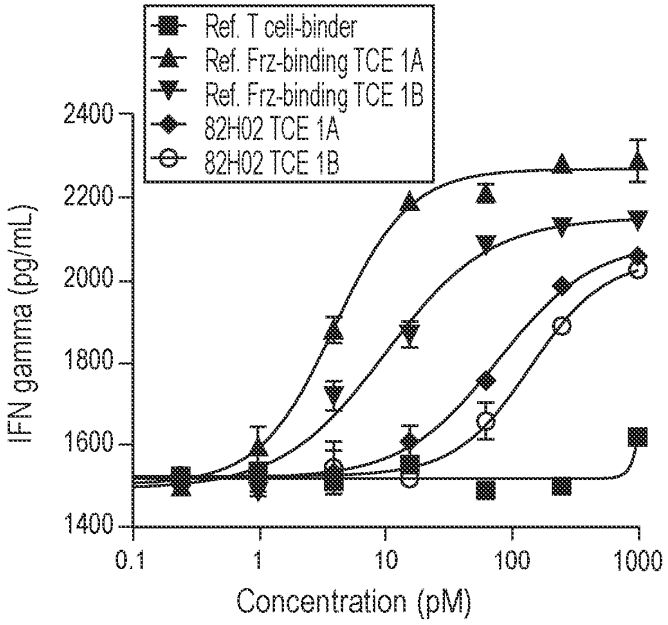

Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B
IFN gamma (pg/mL)
2400
2200
2000
1800
1600
1400
0.1
1
10
100
1000
Concentration (pM)

FIG. 9D

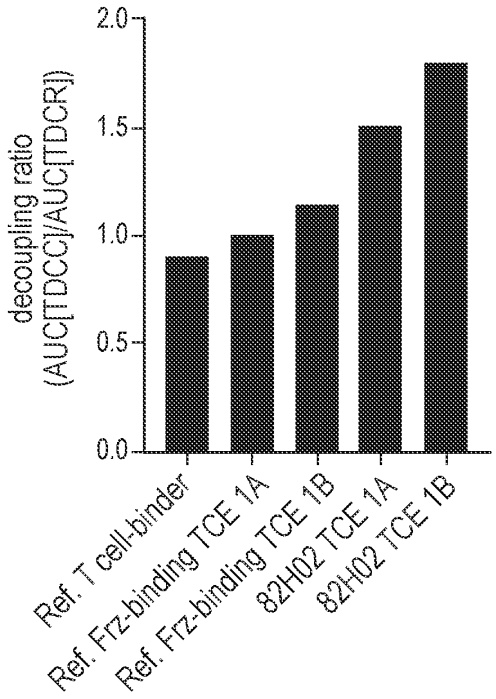

decoupling ratio
(AUC[TDCC]/AUC[TDCR])
2.0
1.5
1.0
0.5
0.0
Ref. T cell-binder
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 9E

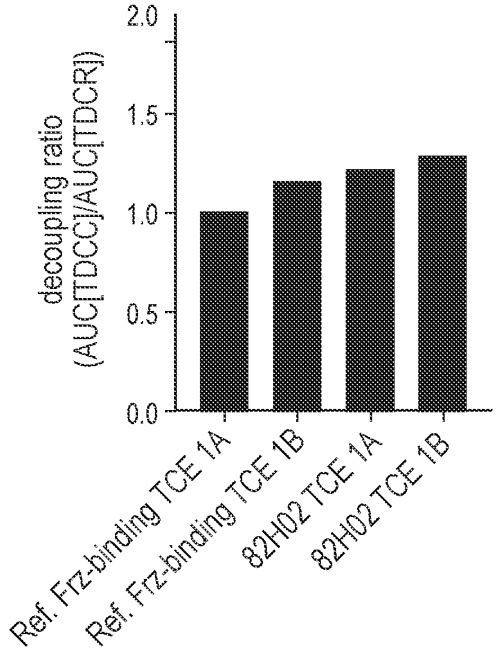

decoupling ratio
(AUC[TDCC]/AUC[TDCR])
2.0
1.5
1.0
0.5
0.0
Ref. Frz-binding TCE 1A
Ref. Frz-binding TCE 1B
82H02 TCE 1A
82H02 TCE 1B

FIG. 9F

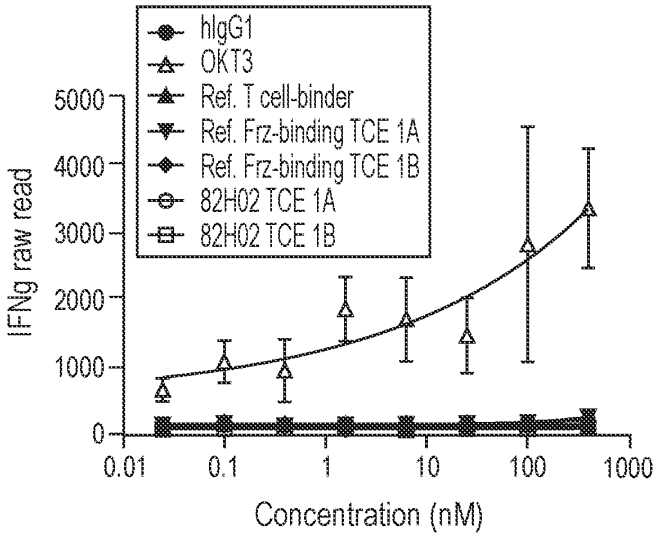


FIG. 10A

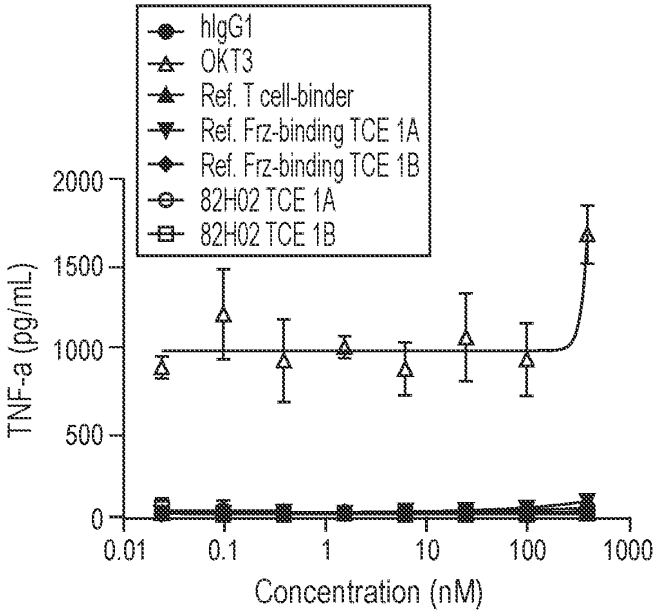


FIG. 10B

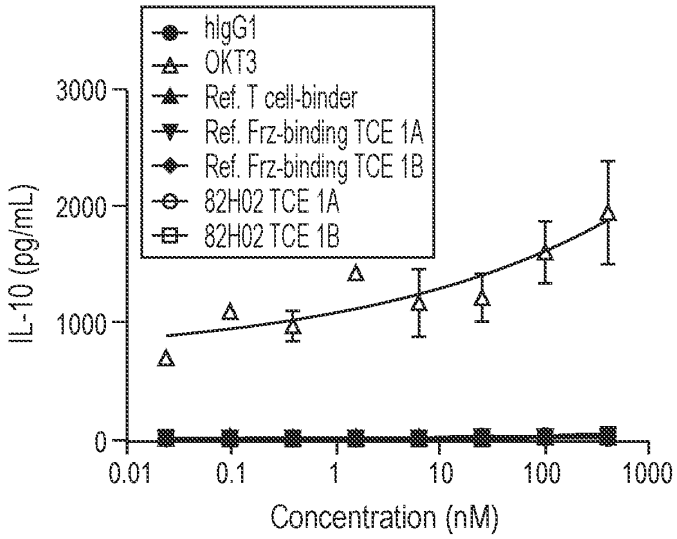


FIG. 10C

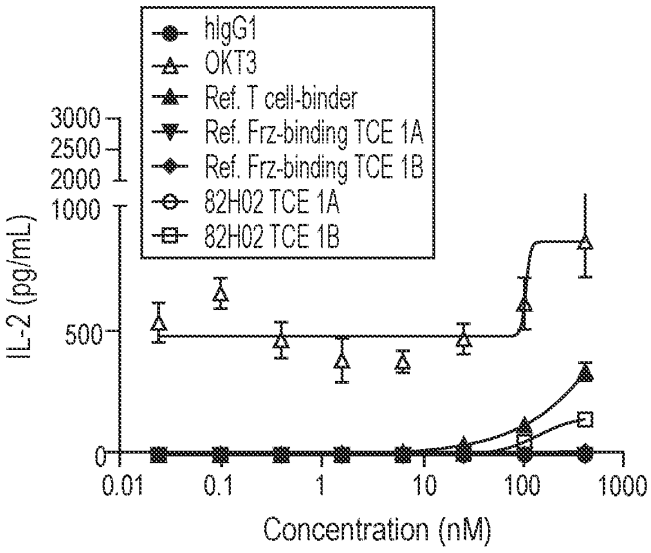


FIG. 10D

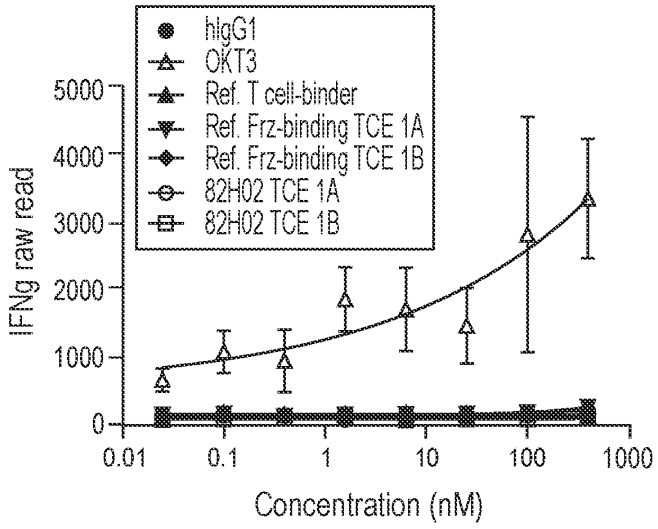


FIG. 11A

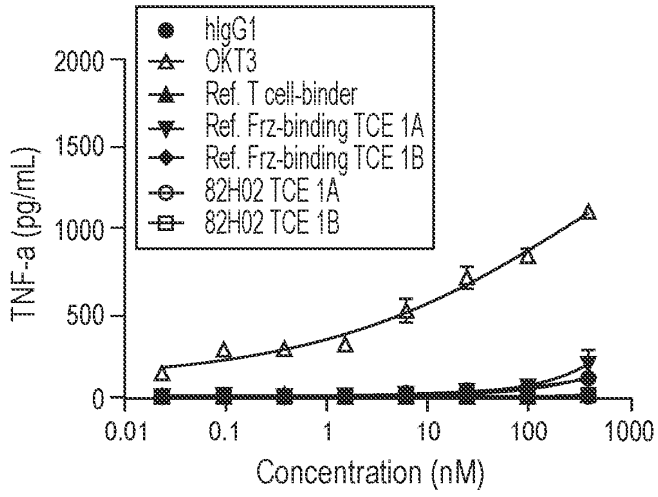


FIG. 11B

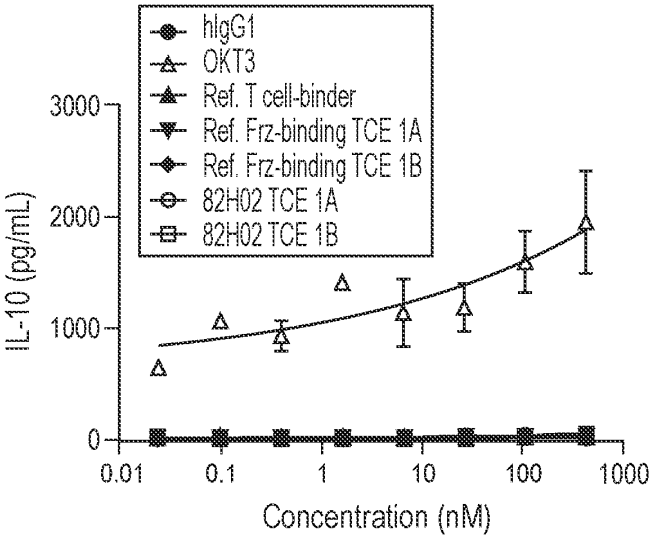


FIG. 11C

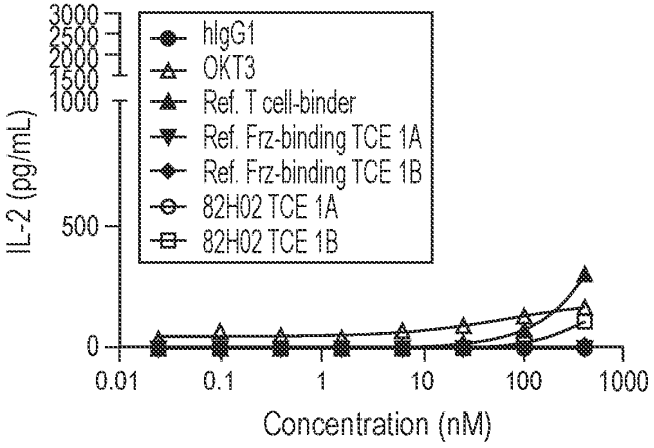


FIG. 11D

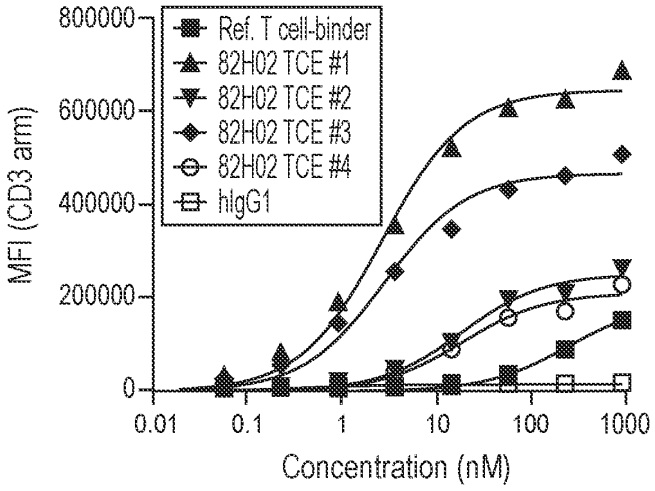


FIG. 12A

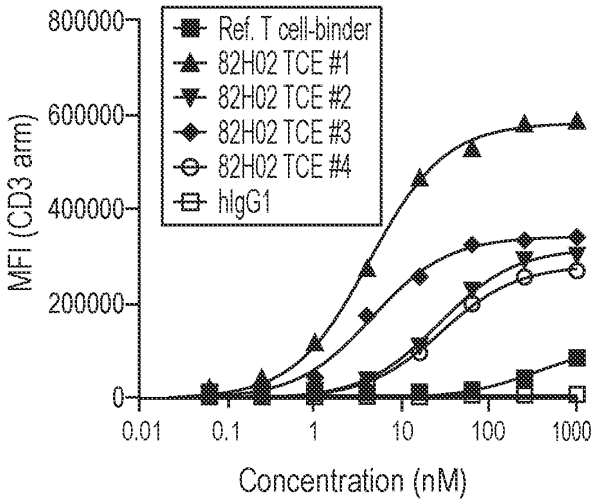


FIG. 12B

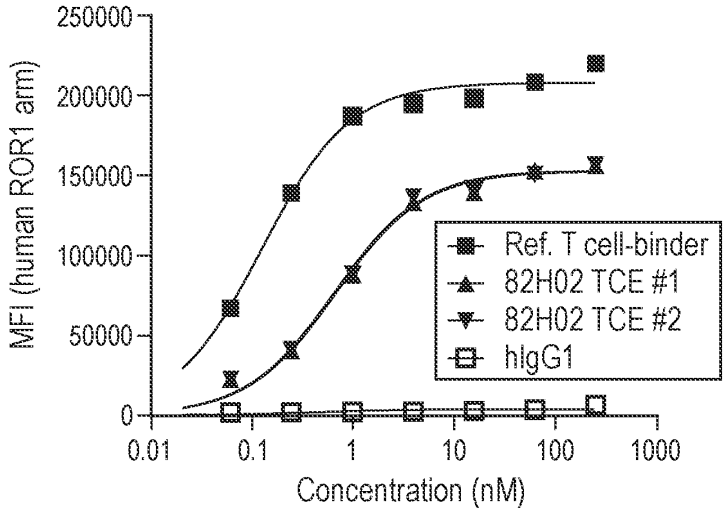


FIG. 13A

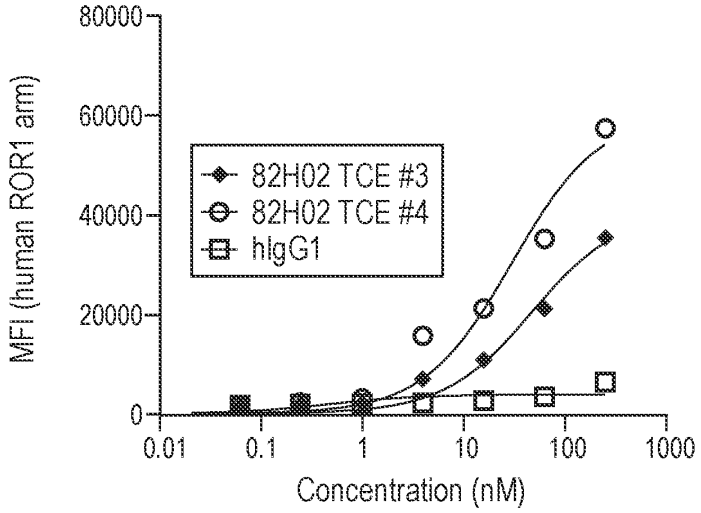


FIG. 13B

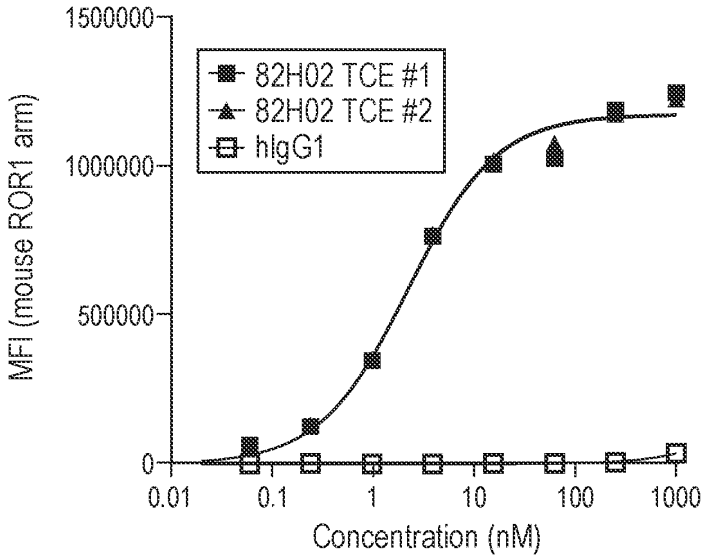


FIG. 13C

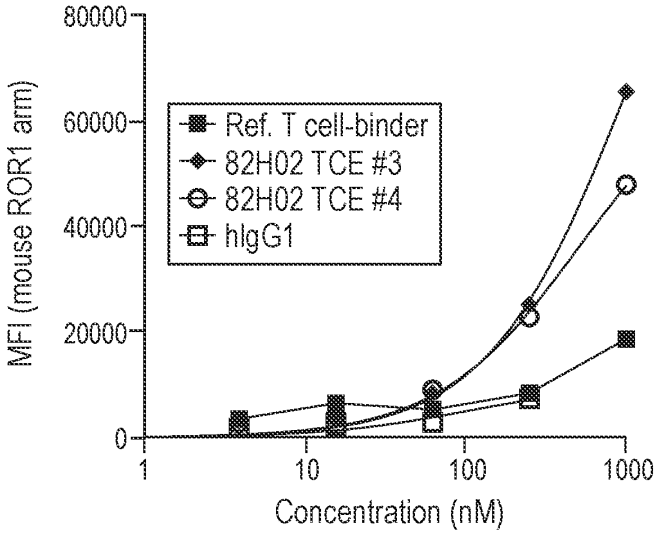


FIG. 13D

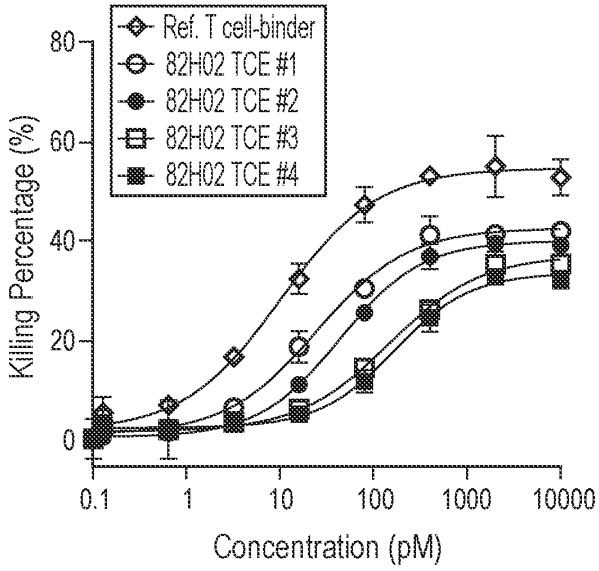


FIG. 14A

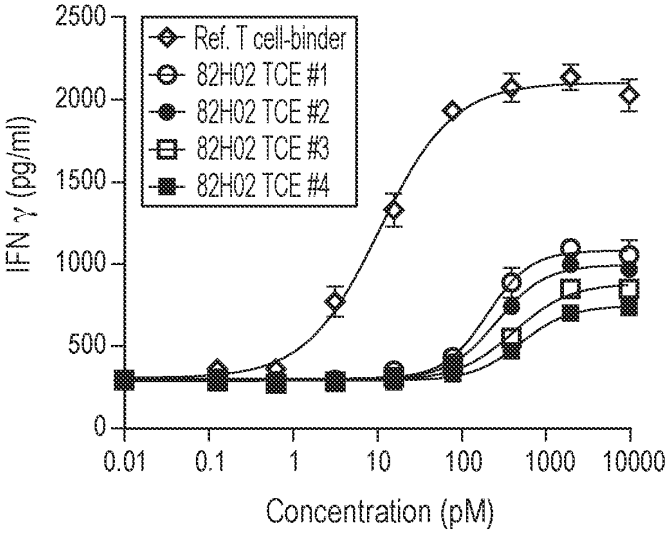


FIG. 14B

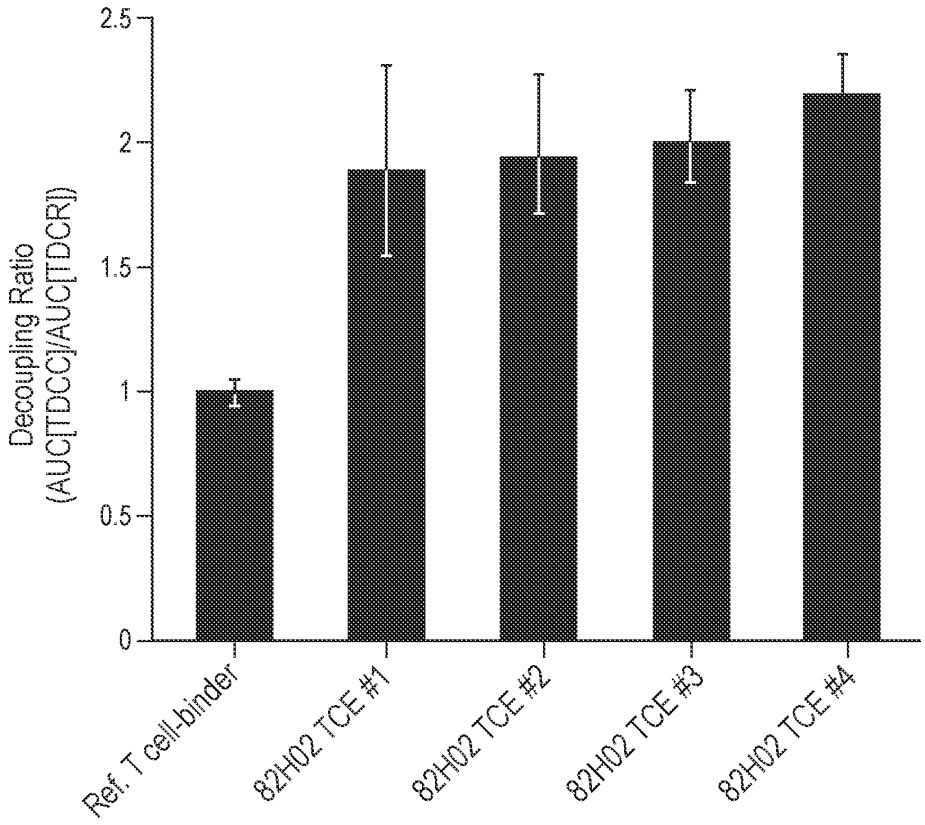

Decoupling Ratio
(AUC[TDCC]/AUC[TDCR])
2.5
2
1.5
1
0.5
0
Ref. T cell-binder
82H02 TCE #1
82H02 TCE #2
82H02 TCE #3
82H02 TCE #4

FIG. 14C

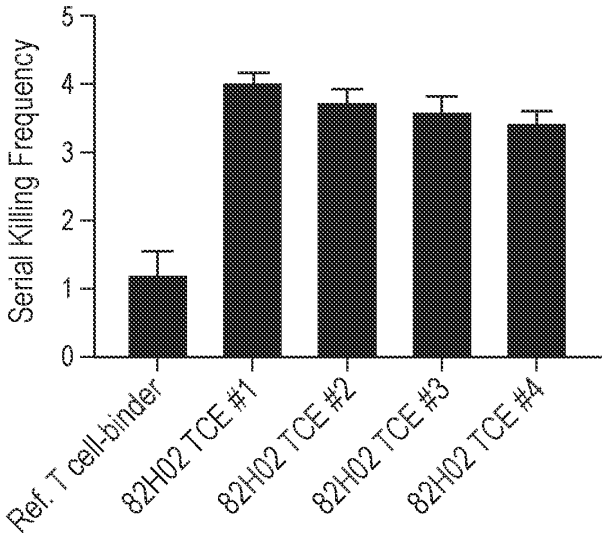

Serial Killing Frequency
0
1
2
3
4
5
Ref. T cell-binder
82H02 TCE #1
82H02 TCE #2
82H02 TCE #3
82H02 TCE #4

FIG. 15

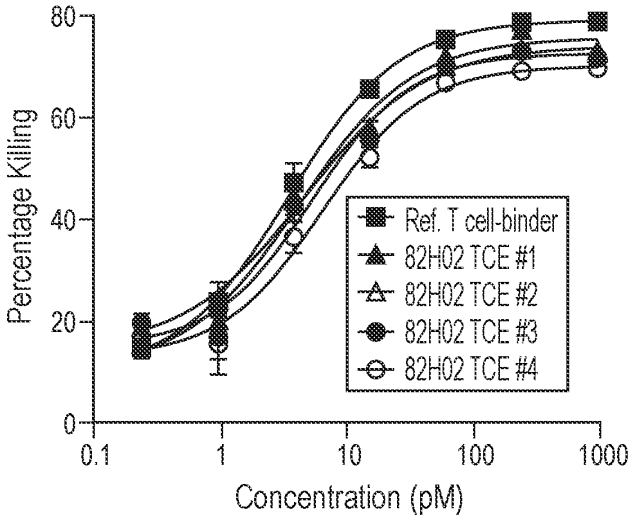


FIG. 16A

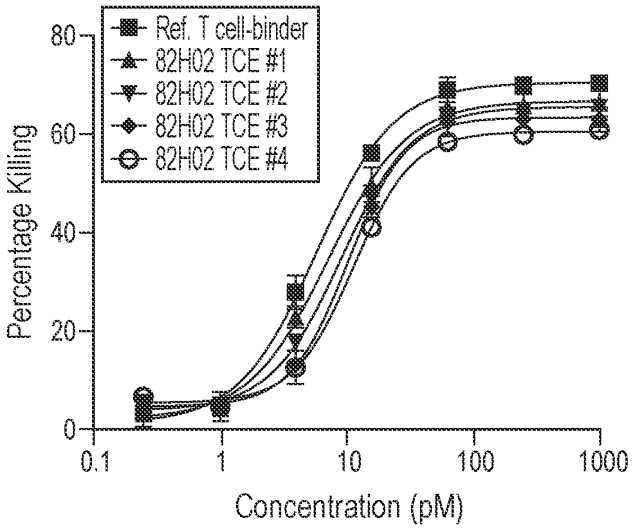


FIG. 16B

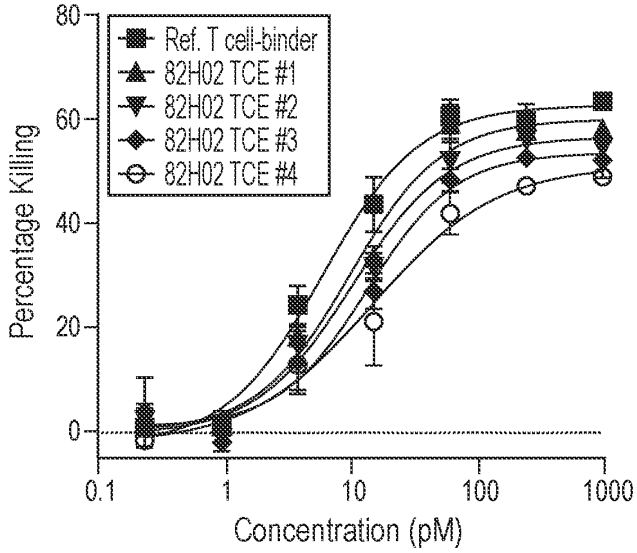


FIG. 16C

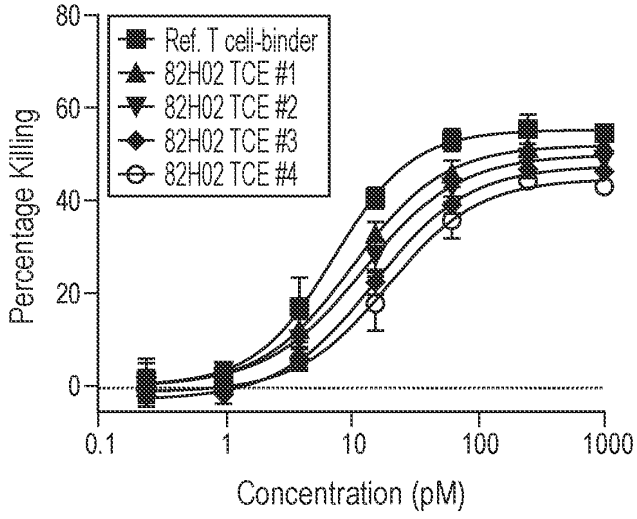


FIG. 16D

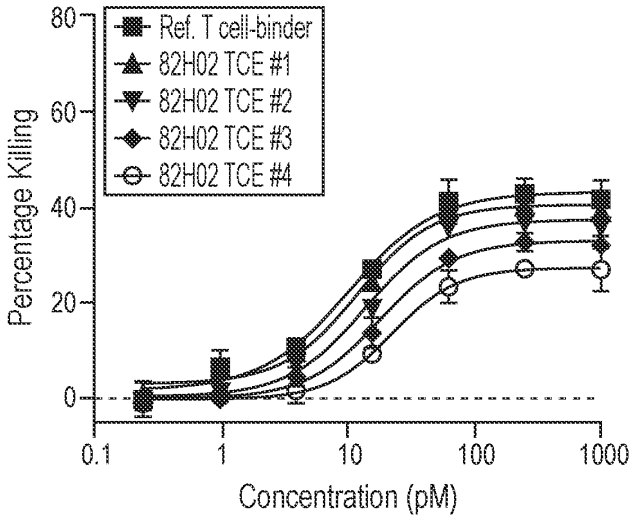


FIG. 16E

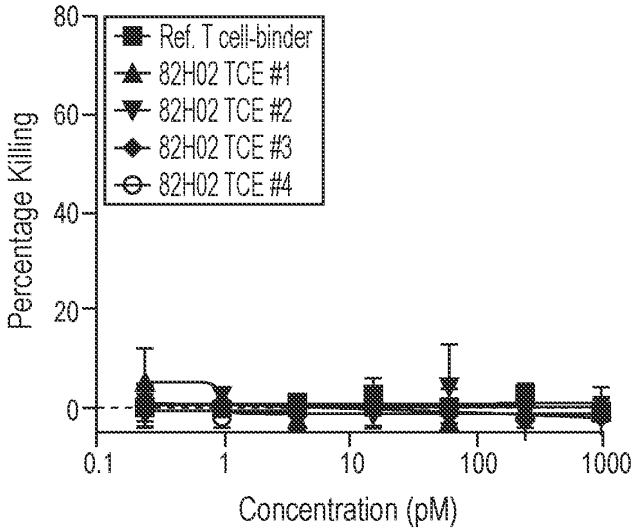


FIG. 16F

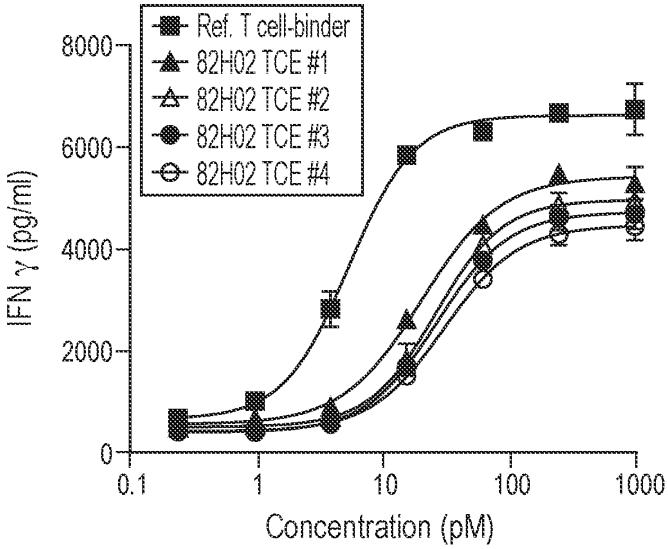


FIG. 17A

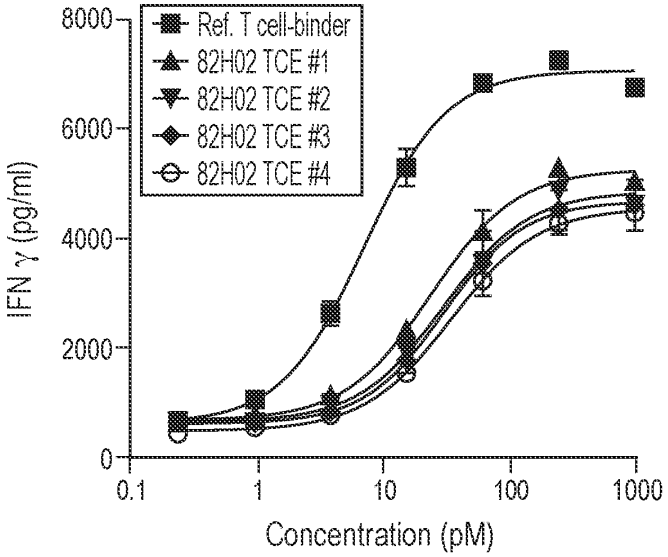


FIG. 17B

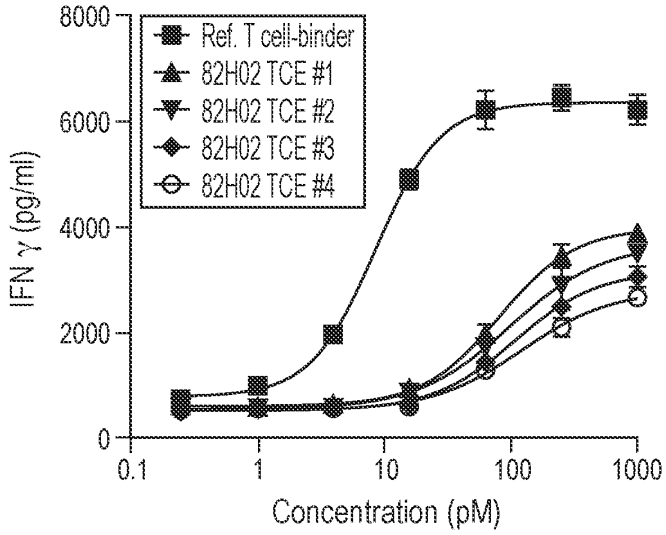


FIG. 17C

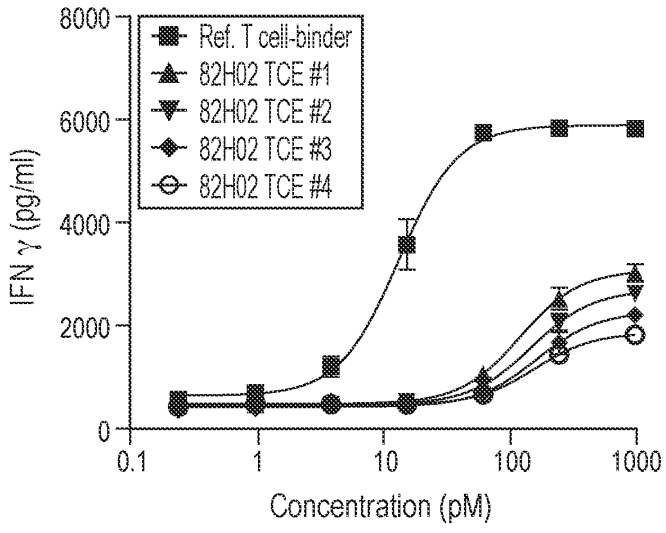


FIG. 17D

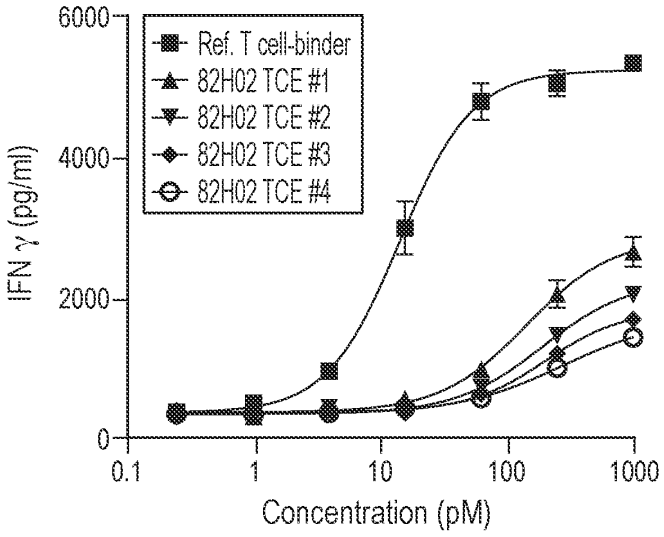


FIG. 17E

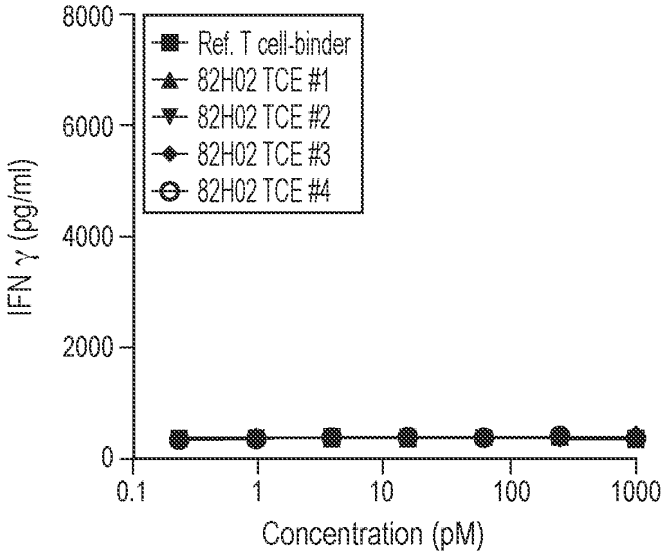


FIG. 17F

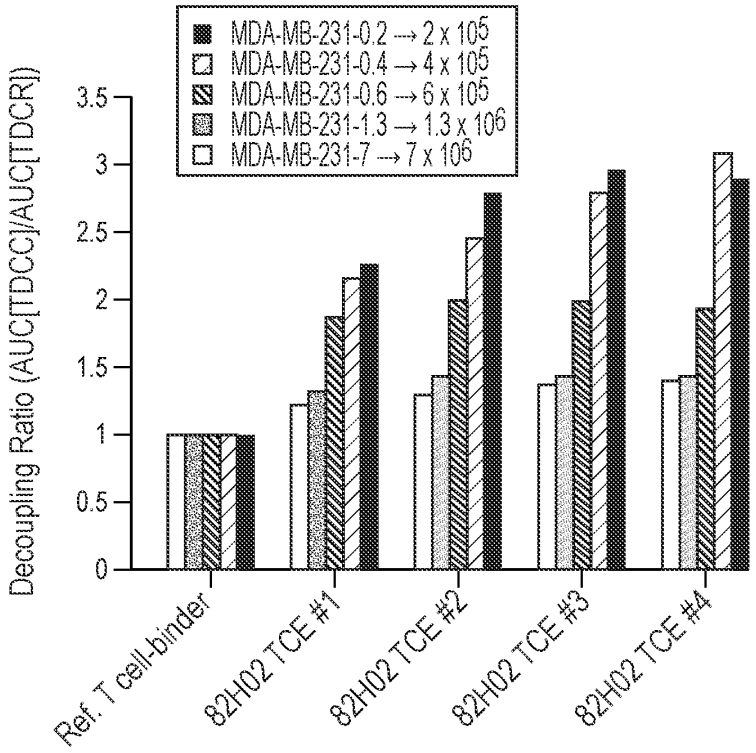

MDA-MB-231-0.2 → 2 x 10^5
MDA-MB-231-0.4 → 4 x 10^5
MDA-MB-231-0.6 → 6 x 10^5
MDA-MB-231-1.3 → 1.3 x 10^6
MDA-MB-231-7 → 7 x 10^6
Decoupling Ratio (AUC[TDCC]/AUC[TDCR])
3.5
3
2.5
2
1.5
1
0.5
0
Ref. T cell-binder
82H02 TCE #1
82H02 TCE #2
82H02 TCE #3
82H02 TCE #4

FIG. 18

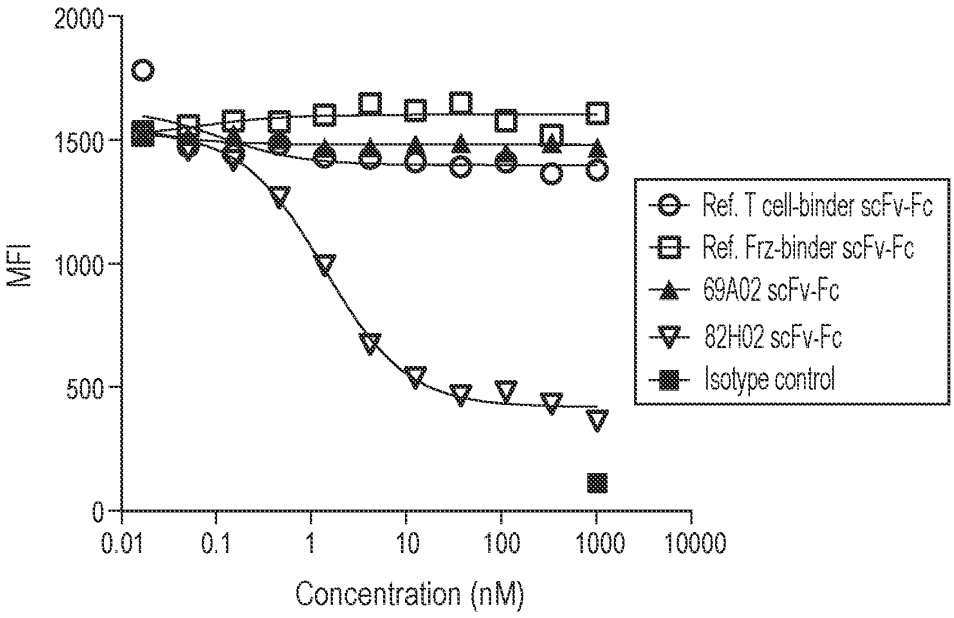

2000
1500
1000
500
0
MFI
0.01
0.1
1
10
100
1000
10000
Concentration (nM)
Ref. T cell-binder scFv-Fc
Ref. Frz-binder scFv-Fc
69A02 scFv-Fc
82H02 scFv-Fc
Isotype control

FIG. 19