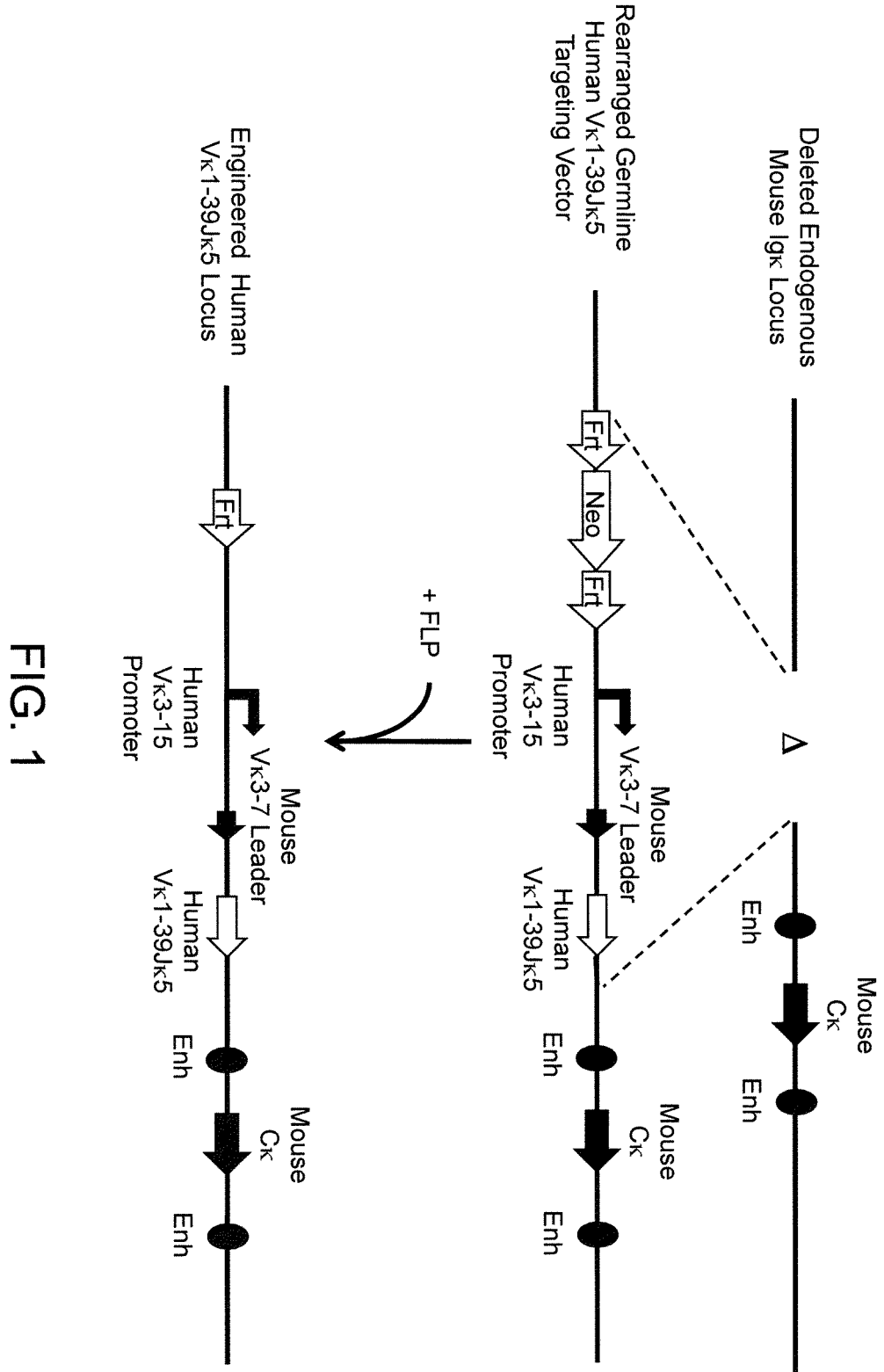

Deleted Endogenous Mouse Igκ Locus
Rearranged Germline Human Vκ1-39Jκ5 Targeting Vector
Engineered Human Vκ1-39Jκ5 Locus
Frt
Neo
Frt
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human Vκ1-39Jκ5
Enh
Mouse Cκ
Enh
Δ
+ FLP
Frt
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human Vκ1-39Jκ5
Enh
Mouse Cκ
Enh

FIG. 1

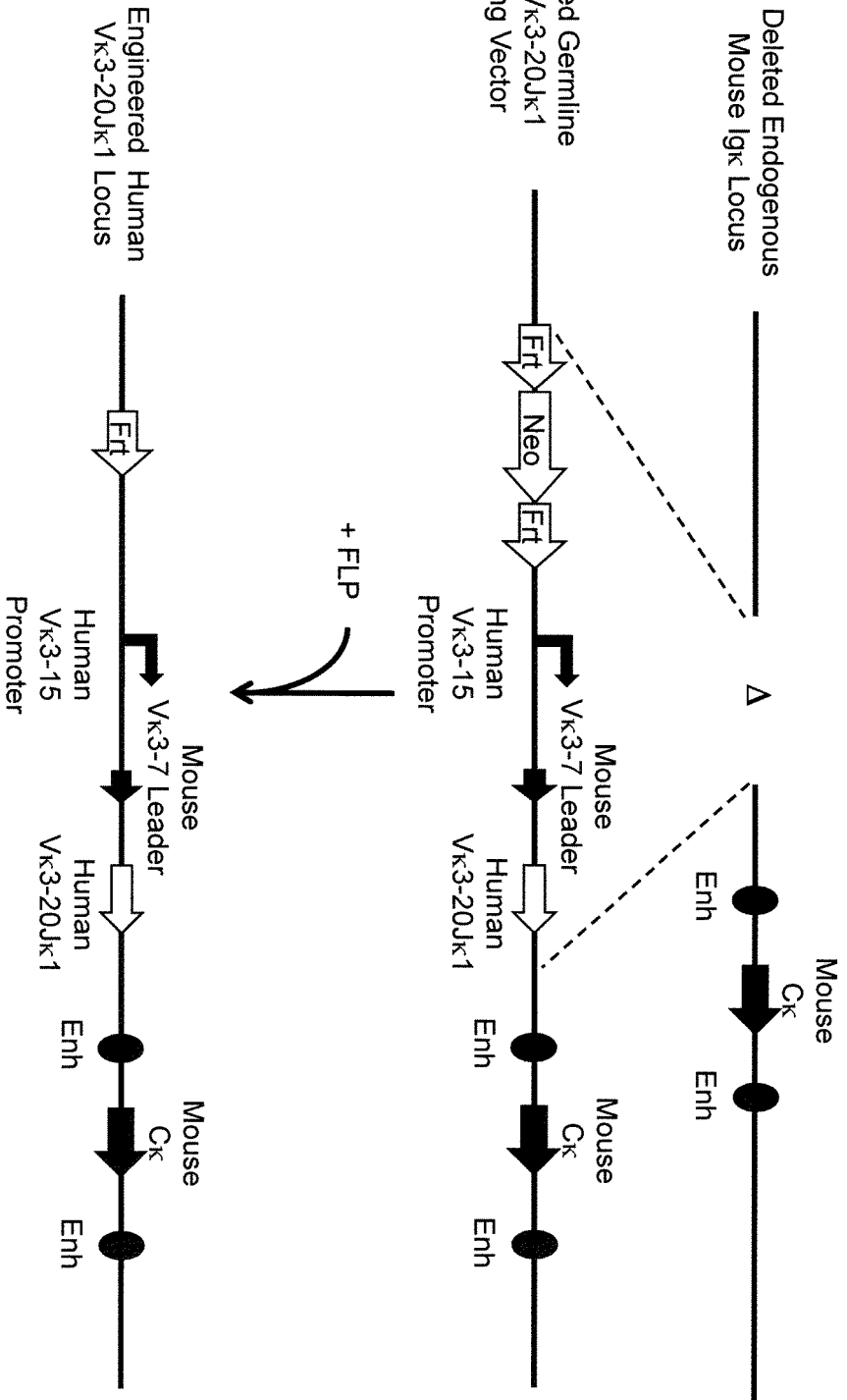

Deleted Endogenous Mouse Igκ Locus
Rearranged Germline Human Vκ3-20Jκ1 Targeting Vector
Engineered Human Vκ3-20Jκ1 Locus
Frt
Neo
Frt
+ FLP
Frt
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human Vκ3-20Jκ1
Enh
Mouse Cκ
Enh
Δ
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human Vκ3-20Jκ1
Enh
Mouse Cκ
Enh
Mouse
Cκ
Enh
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human Vκ3-20Jκ1
Enh
Mouse Cκ
Enh

FIG. 2

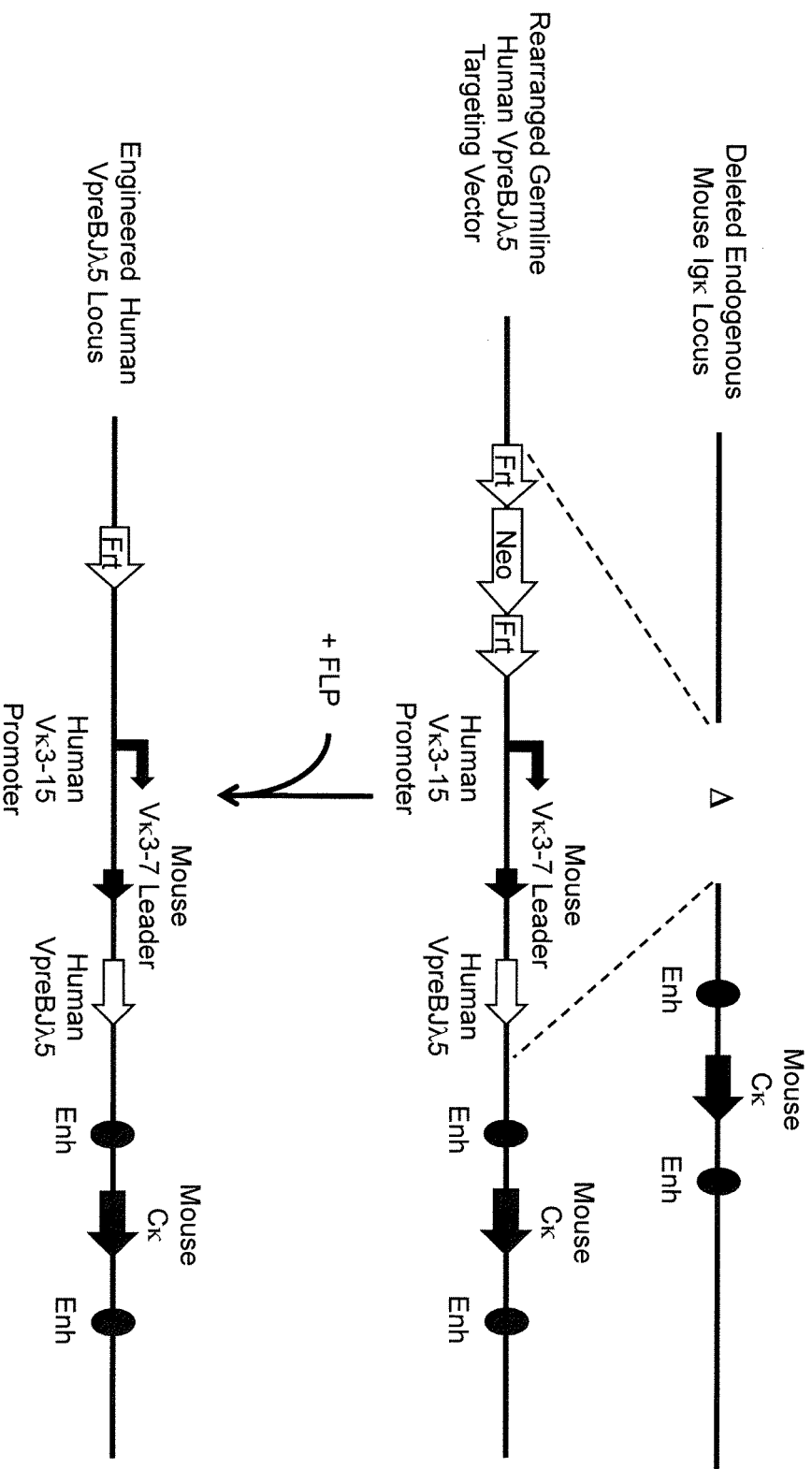

Deleted Endogenous Mouse Igκ Locus
Rearranged Germline Human VpreBJλ5 Targeting Vector
Engineered Human VpreBJλ5 Locus
Frt
Neo
Frt
Frt
+ FLP
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human VpreBJλ5
Enh
Mouse Cκ
Enh
Δ
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human VpreBJλ5
Enh
Mouse Cκ
Enh
Human Vκ3-15 Promoter
Mouse Vκ3-7 Leader
Human VpreBJλ5
Enh
Mouse Cκ
Enh

FIG. 3

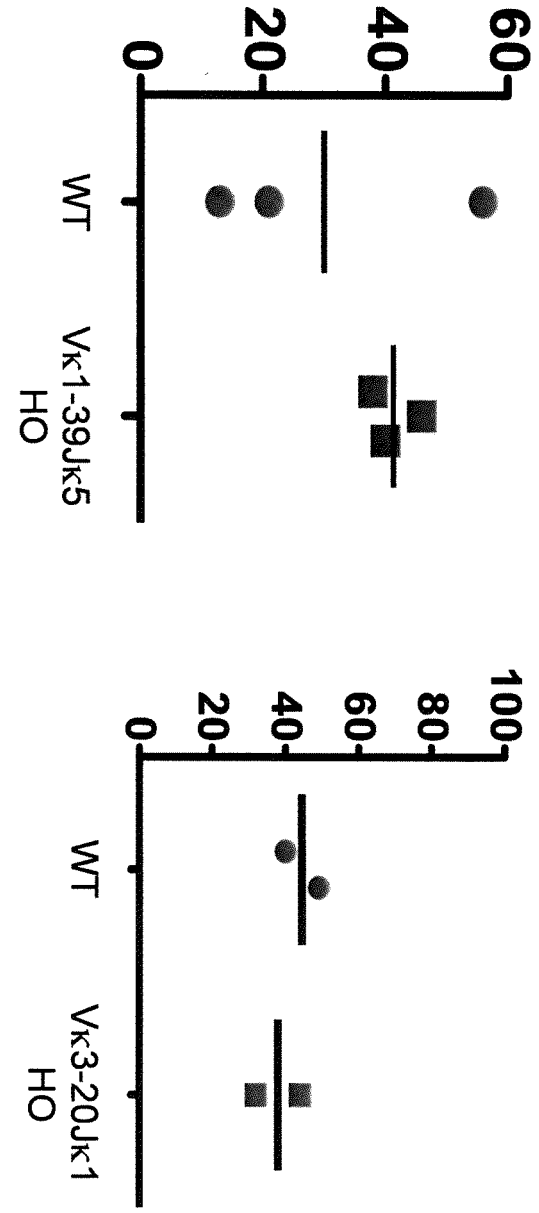


FIG. 4

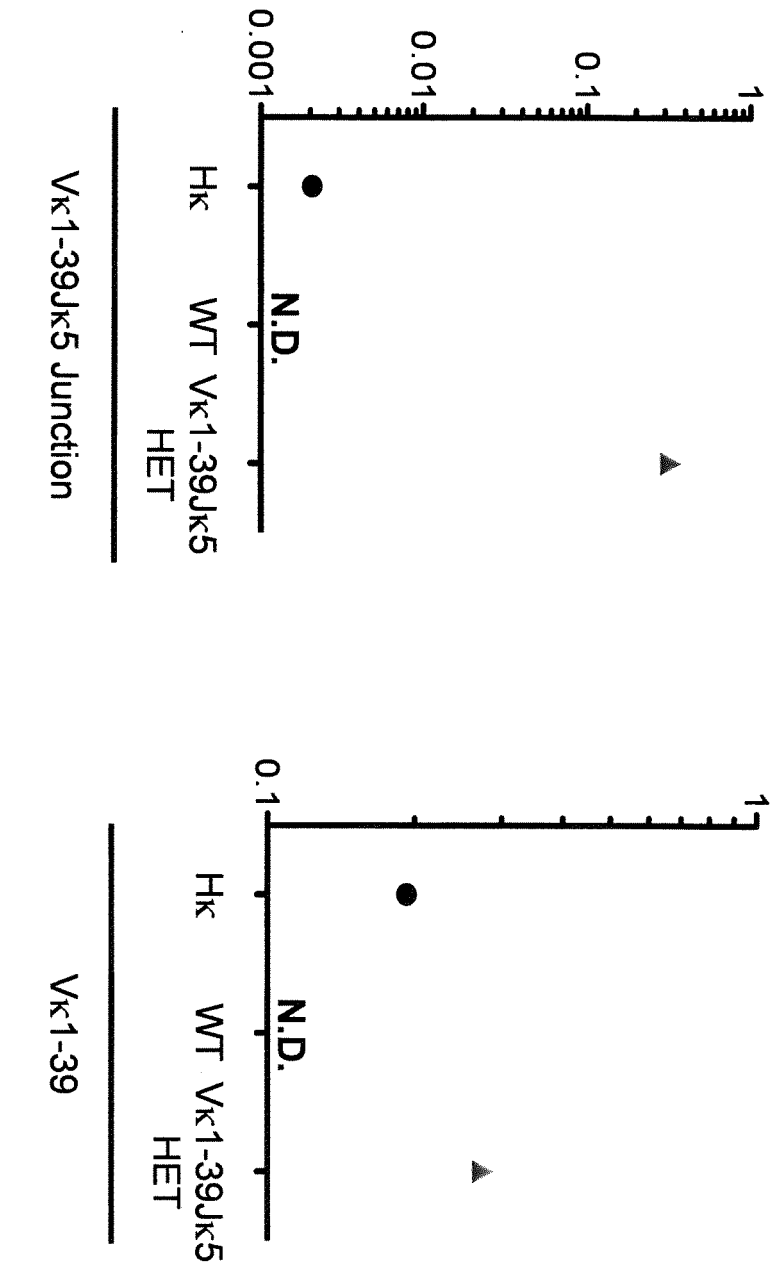

0.001
0.01
0.1
1
Hκ
WT
Vκ1-39Jκ5
HET
N.D.
Vκ1-39Jκ5 Junction
0.1
1
Hκ
WT
Vκ1-39Jκ5
HET
N.D.
Vκ1-39

FIG. 5A

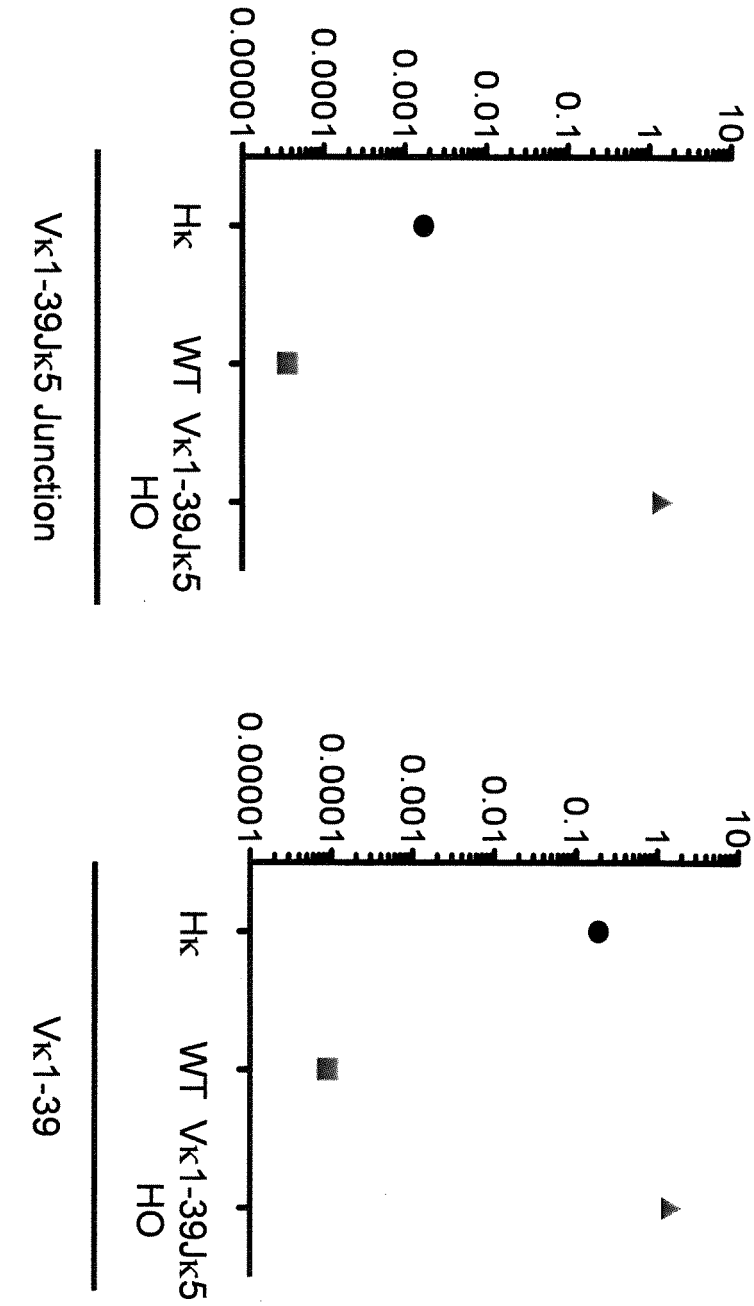

0.00001
0.0001
0.001
0.01
0.1
1
10
Hκ
WT Vκ1-39Jκ5
HO
Vκ1-39Jκ5 Junction
0.00001
0.0001
0.001
0.01
0.1
1
10
Hκ
WT Vκ1-39Jκ5
HO
Vκ1-39

FIG. 5B

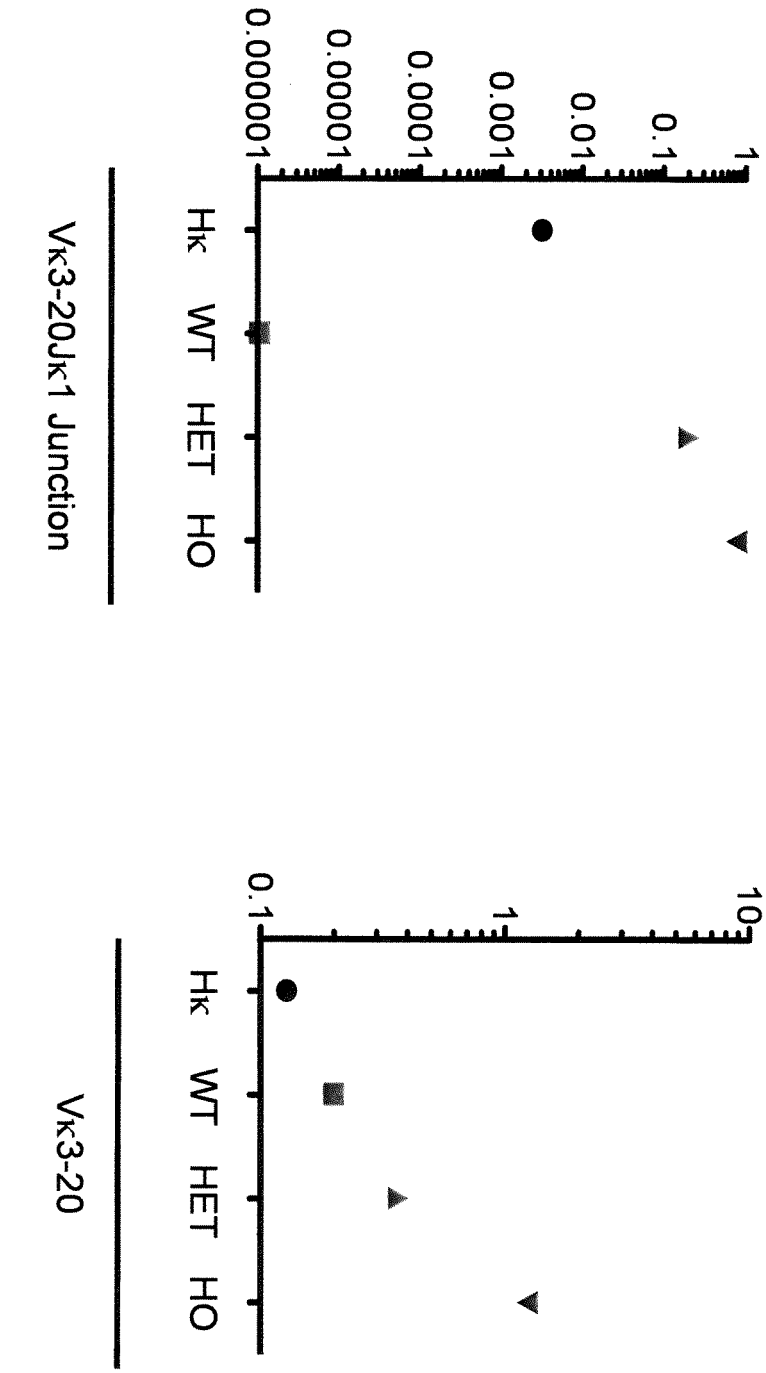

0.000001
0.00001
0.0001
0.001
0.01
0.1
1
Hκ WT HET HO
Vκ3-20Jκ1 Junction
0.1
1
10
Hκ WT HET HO
Vκ3-20

FIG. 5C

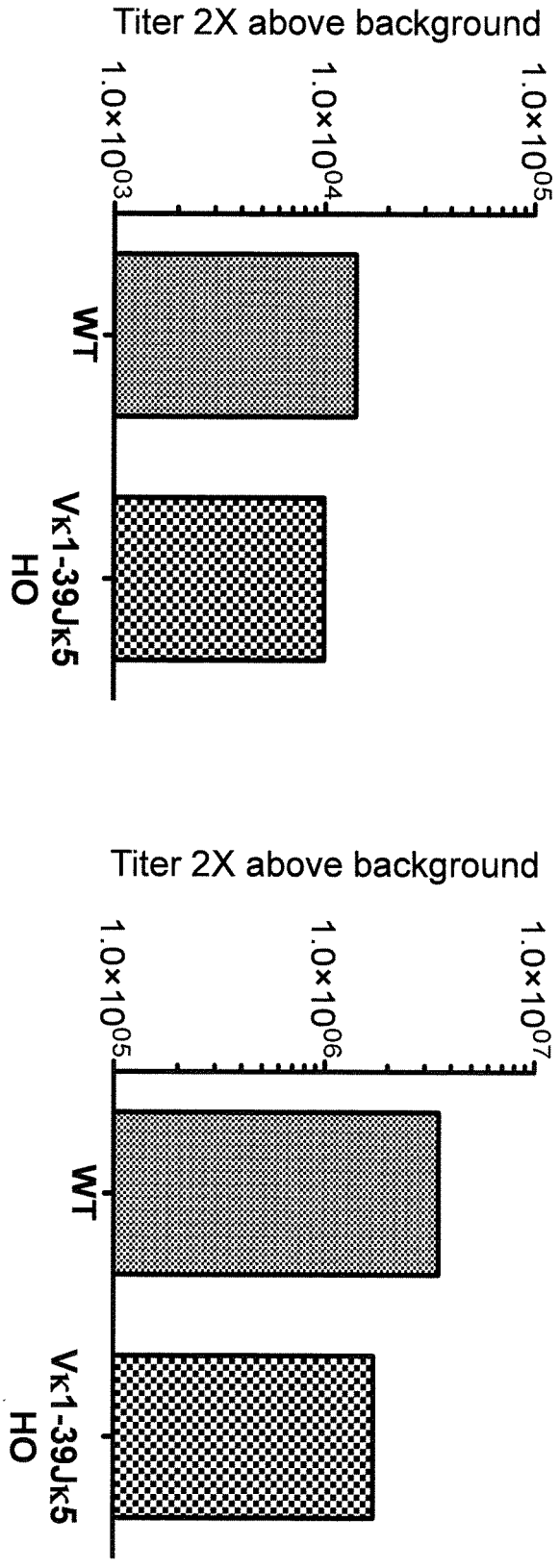

Titer 2X above background
1.0×10^03
1.0×10^04
1.0×10^05
WT
Vκ1-39Jκ5 HO
Titer 2X above background
1.0×10^05
1.0×10^06
1.0×10^07
WT
Vκ1-39Jκ5 HO

FIG. 6A

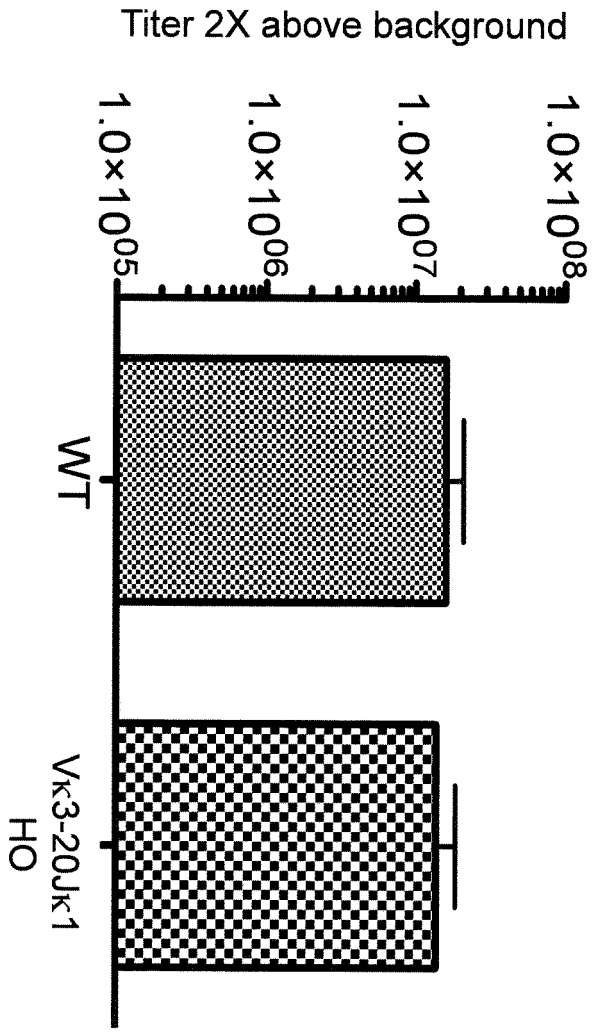

Titer 2X above background
1.0×10^05
1.0×10^06
1.0×10^07
1.0×10^08
WT
Vκ3-20Jκ1
HO

FIG. 6B