

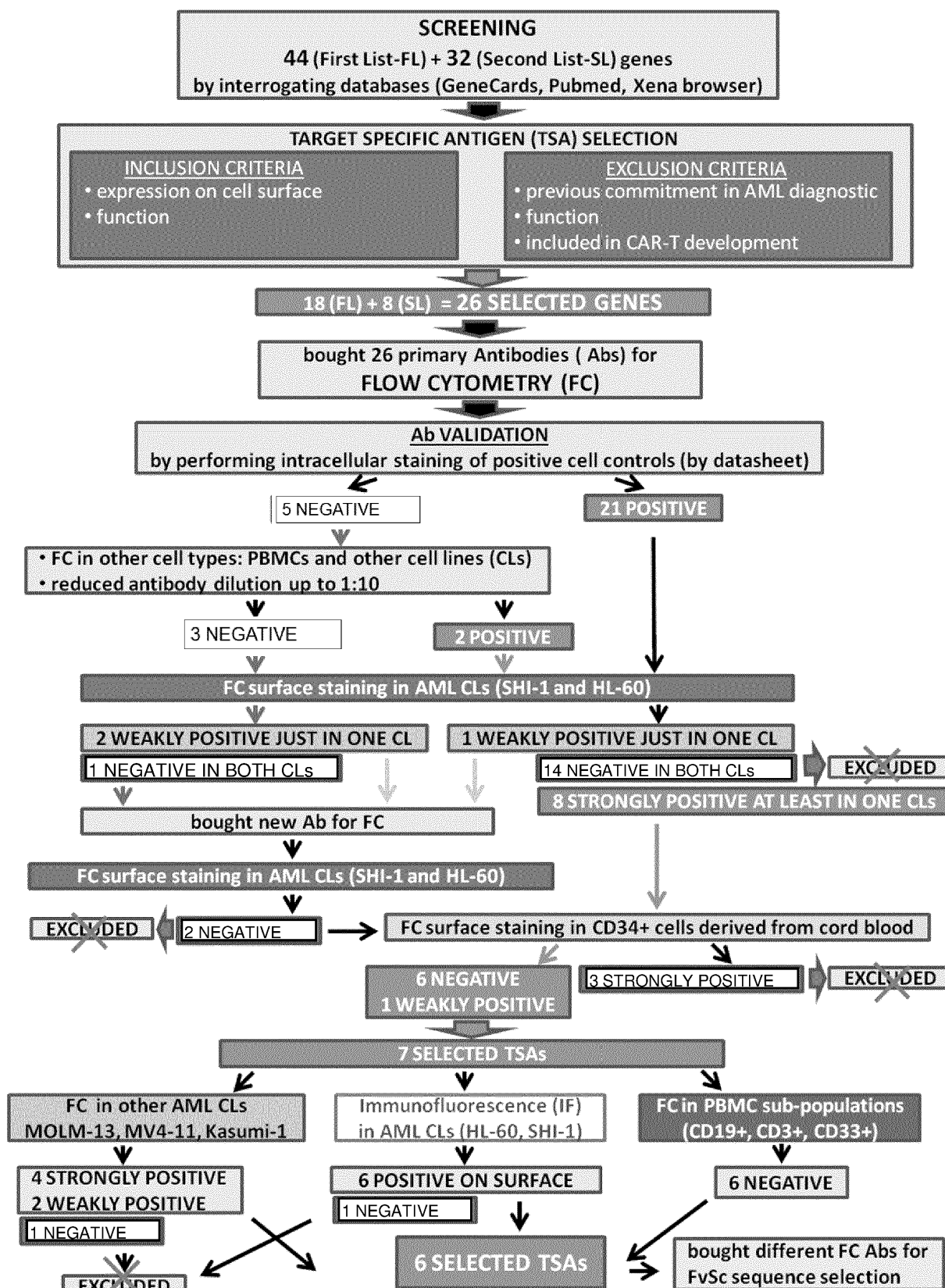


FIG. 1

SUBSTITUTE SHEET (RULE 26)

FIG. 2A

AML Cell Lines

Ab CD69 (Invitrogen 14-0699-82)

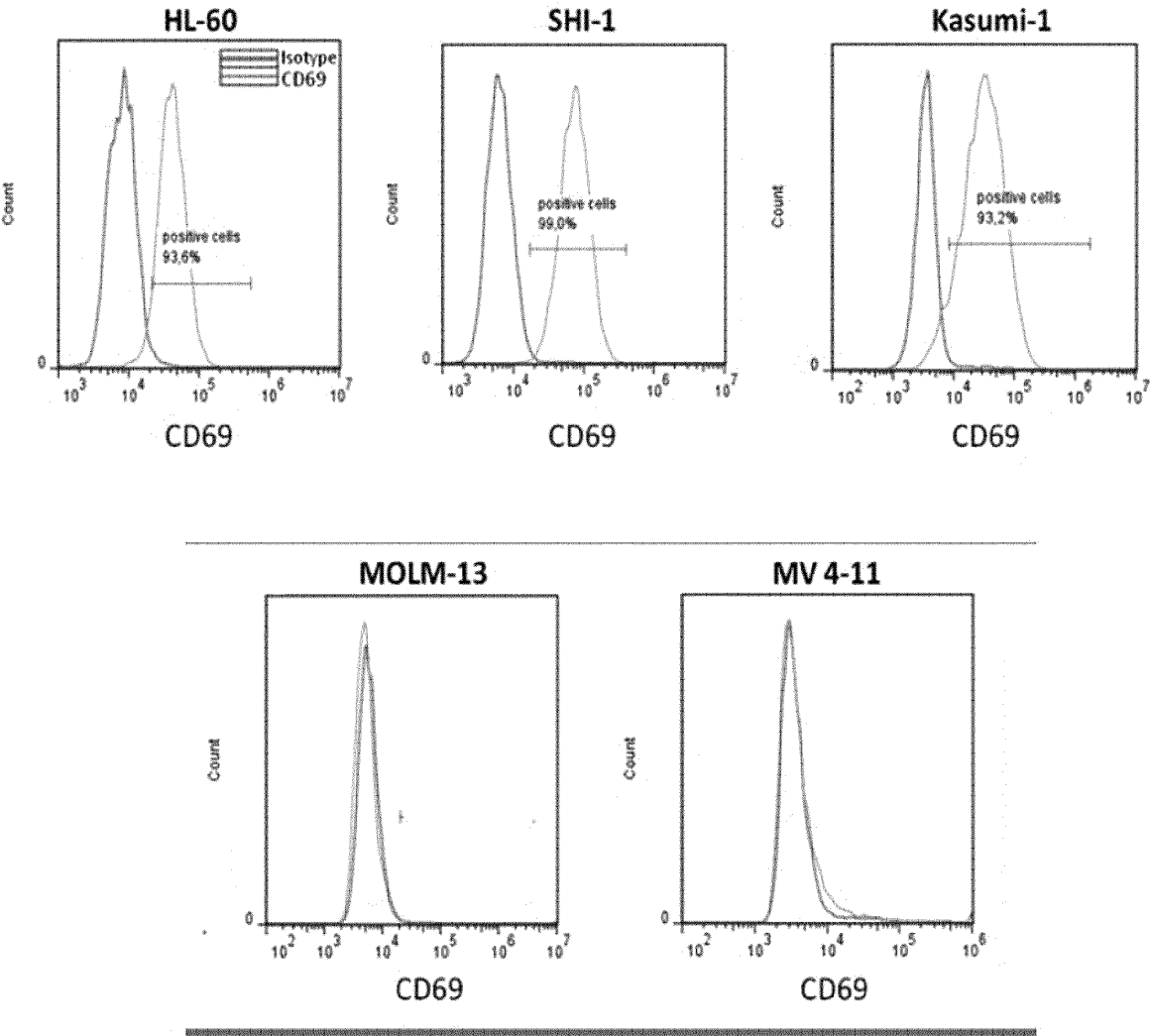


FIG. 2A (cont'd)

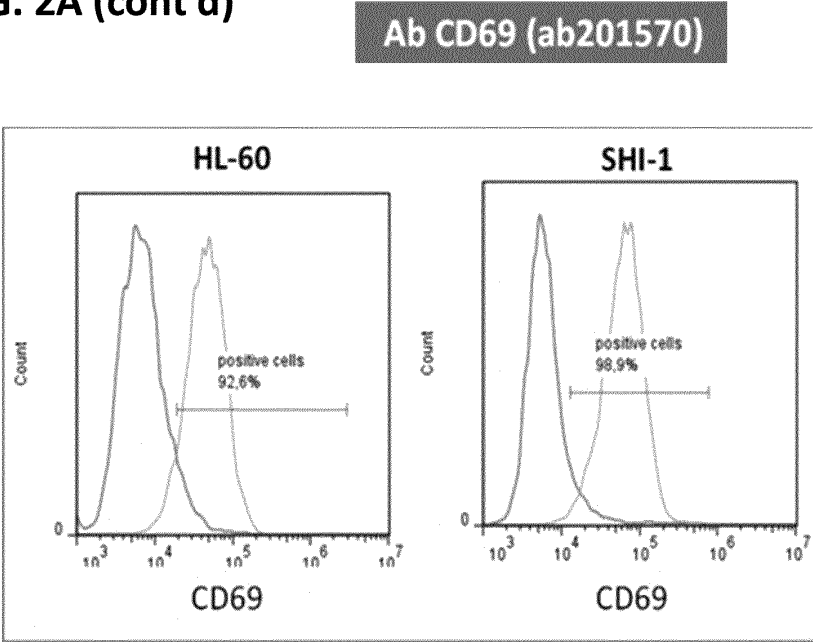


FIG. 2B

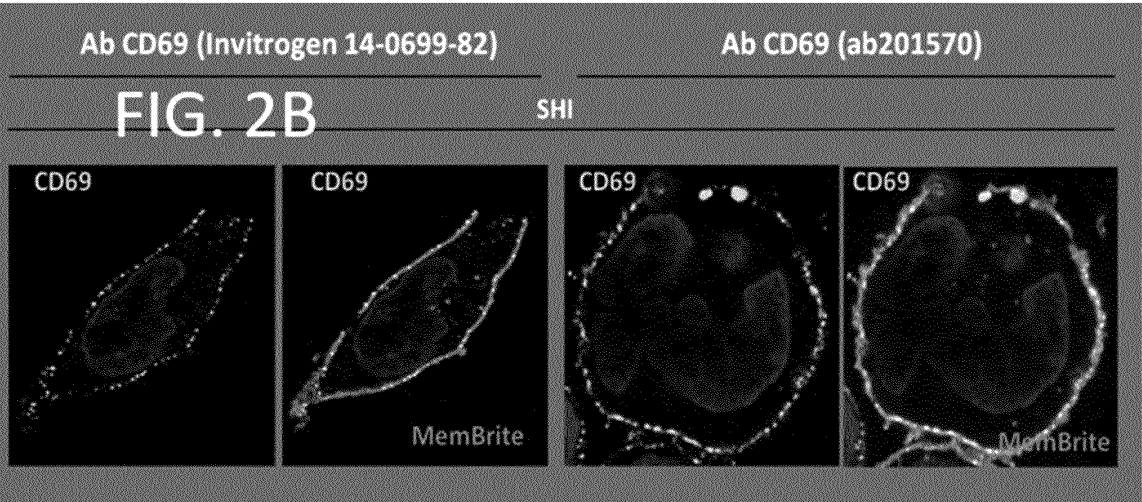
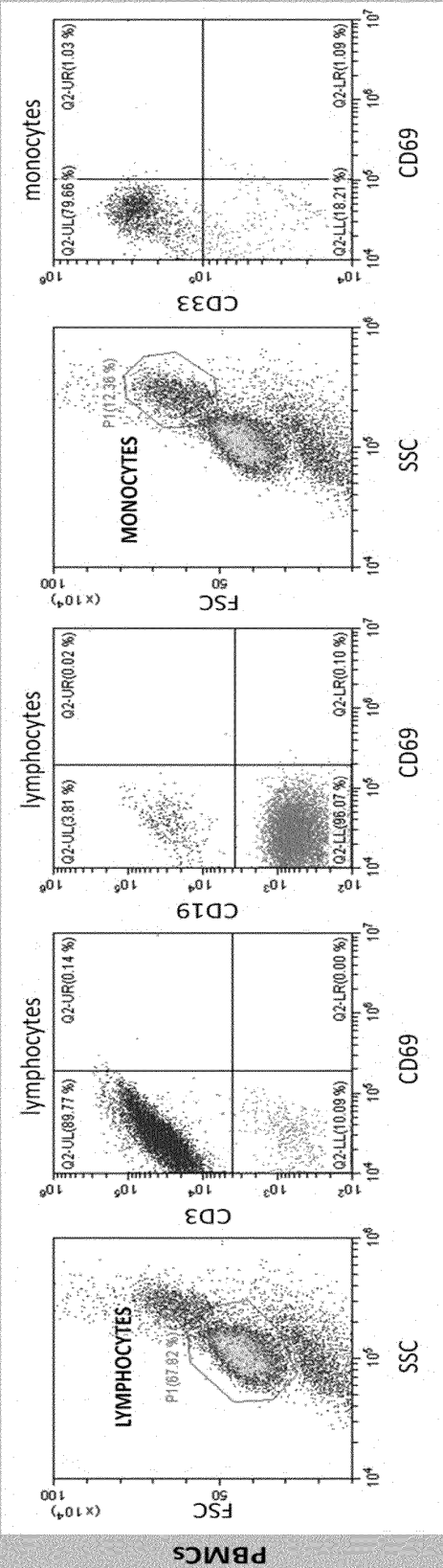


FIG. 2C

HEALTHY HEMATOPOIETIC CELLS

Ab CD69 (Invitrogen 14-0699-82)



Ab CD69 (Invitrogen14-0699-82) Ab CD69 (R&D MAB2359)

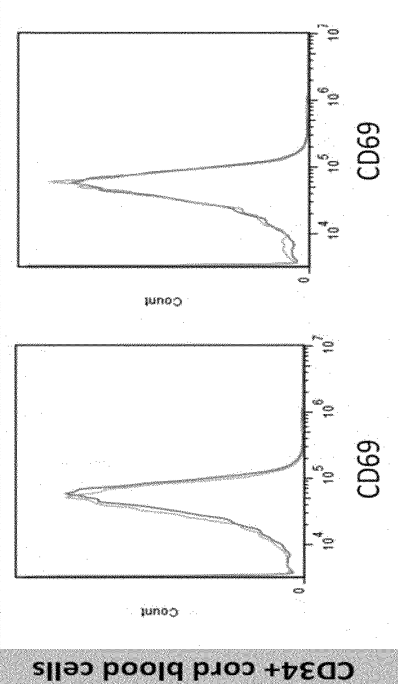


FIG. 3A

AML Cell Lines

Ab CD63 (ab59479)

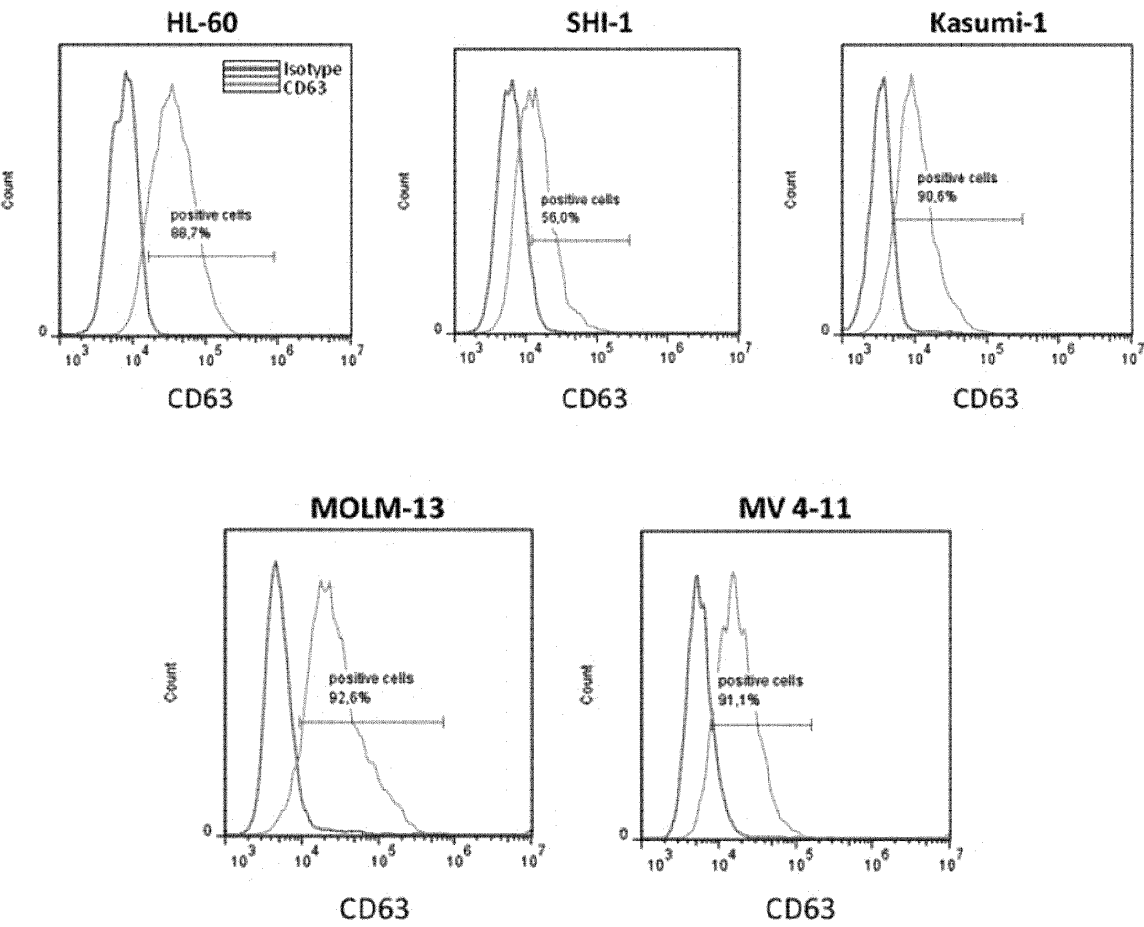


FIG. 3A (cont'd)

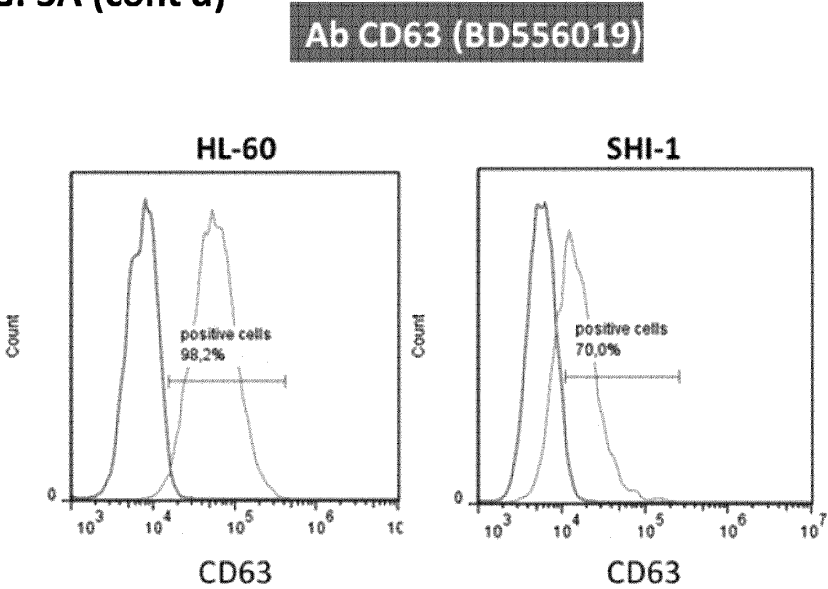


FIG. 3B

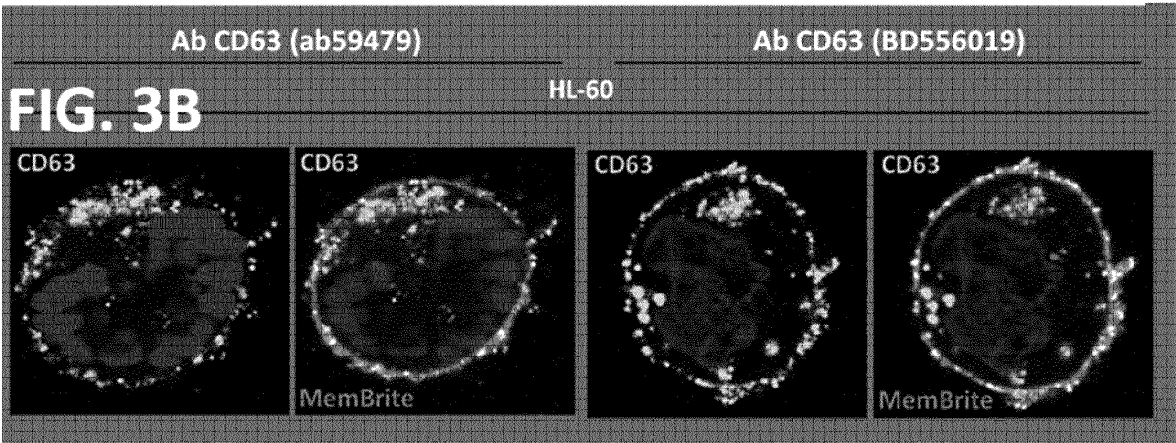
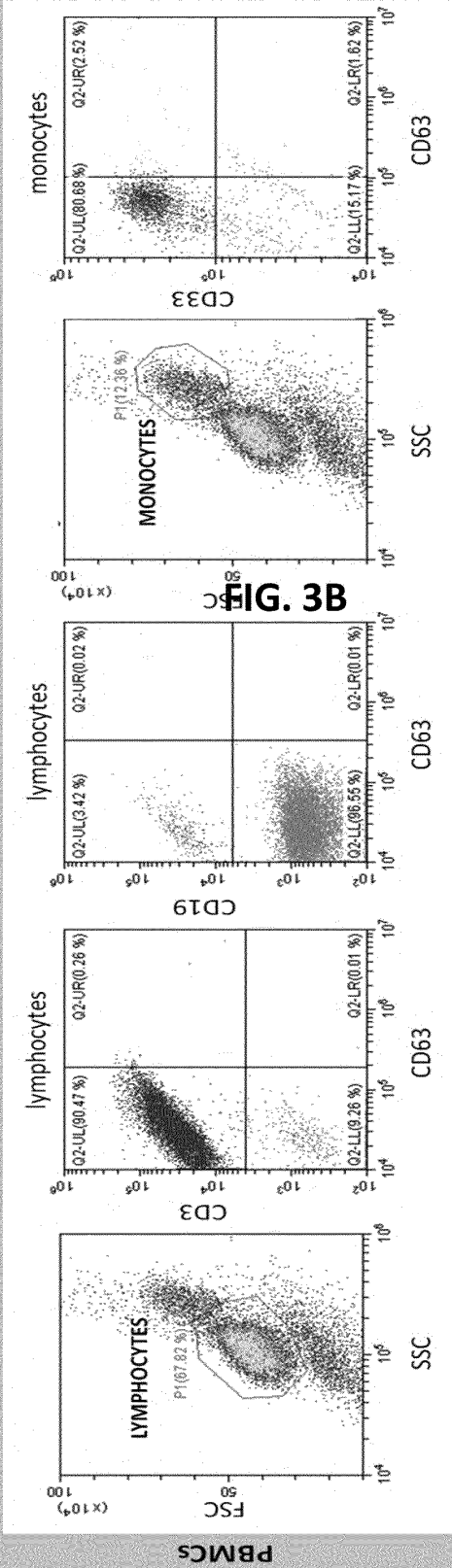


FIG. 3C

HEALTHY HEMATOPOIETIC CELLS

Ab CD63 (ab59479)



Ab CD63 (ab59479)

Ab CD63 (BD556019)

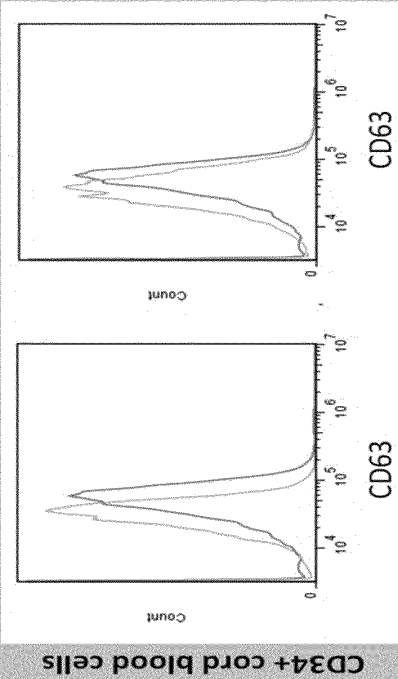


FIG. 4A

AML Cell Lines

Ab CD151 (Invitrogen MA5-16443)

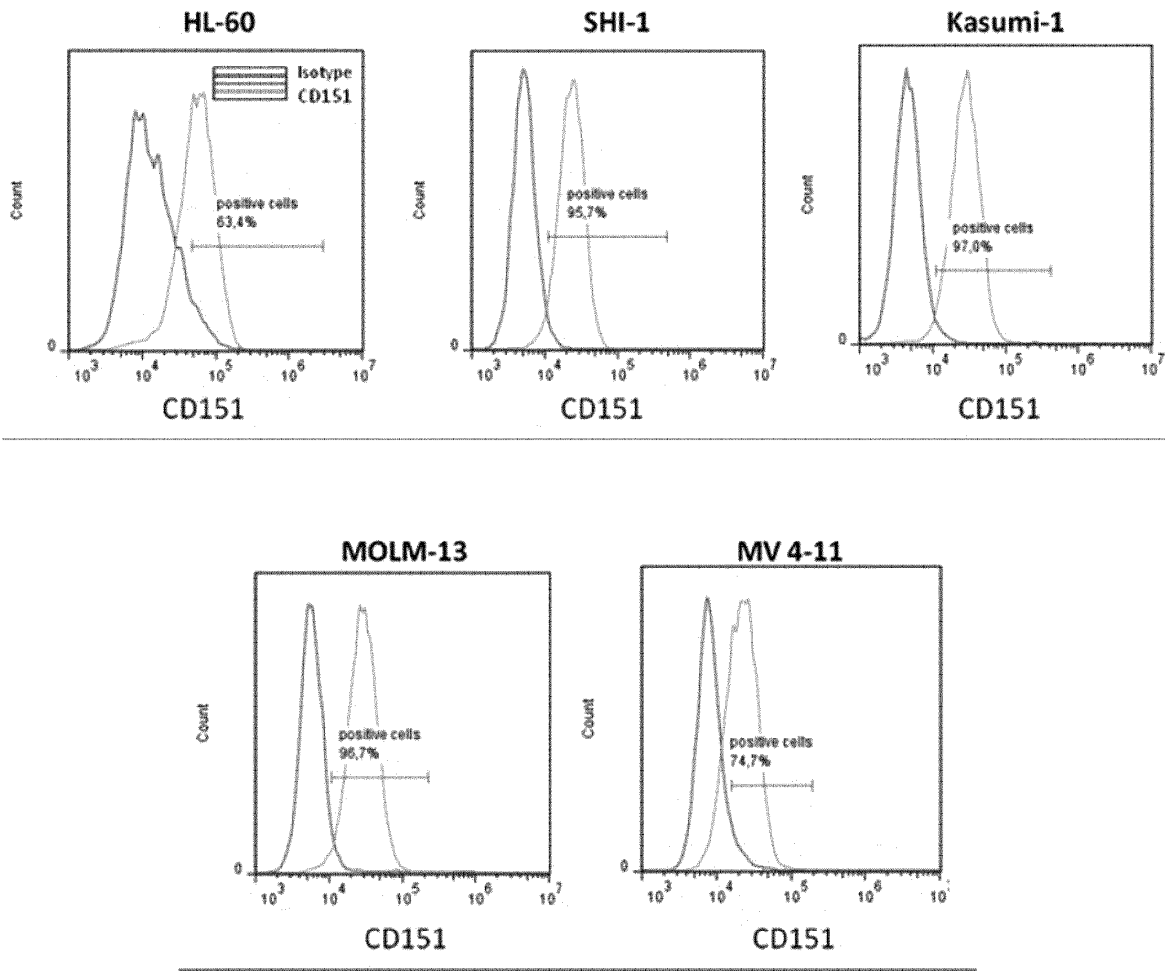


FIG. 4A (cont'd)

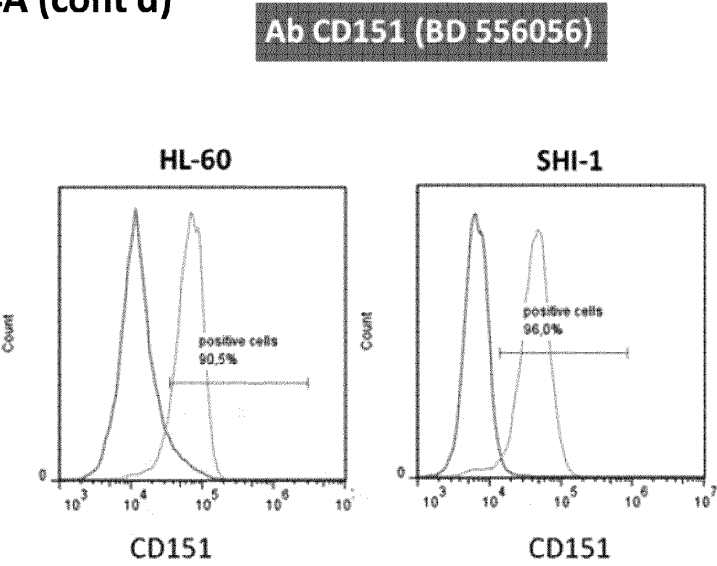


FIG. 4B

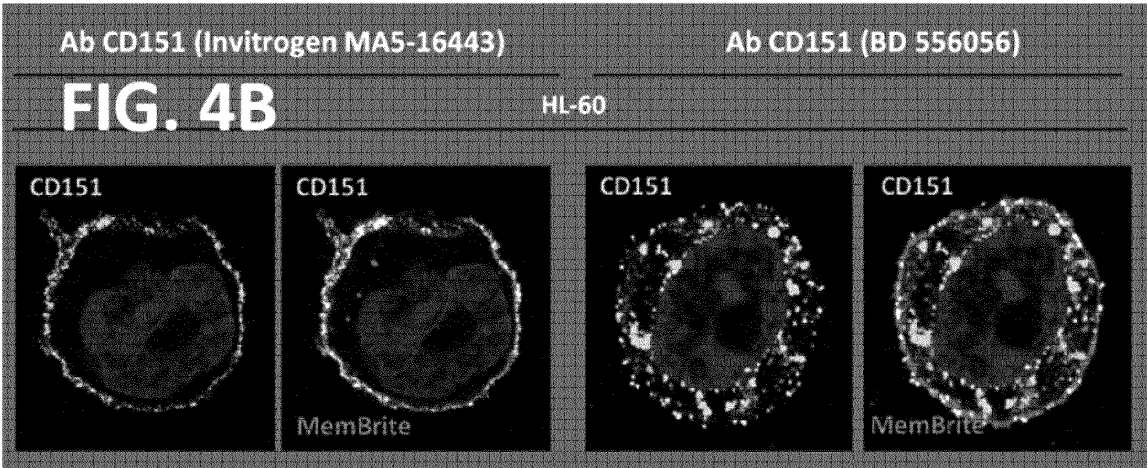
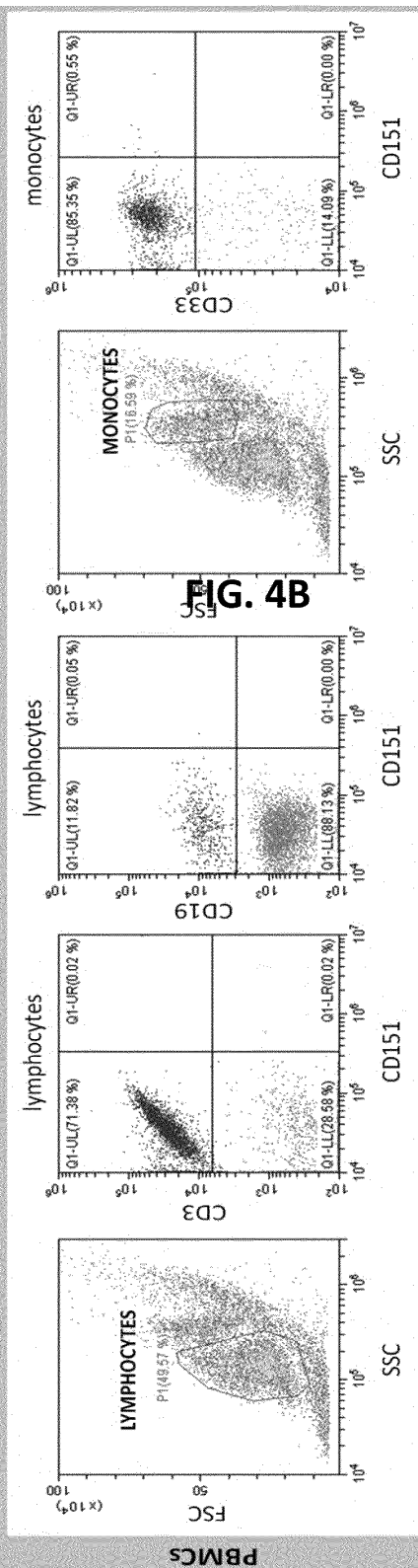


FIG. 4C

HEALTHY HEMATOPOIETIC CELLS

Ab CD151 (Invitrogen MA5-16443)



Ab CD151 (Invitrogen MA5-16443) Ab CD151 (BD556056)

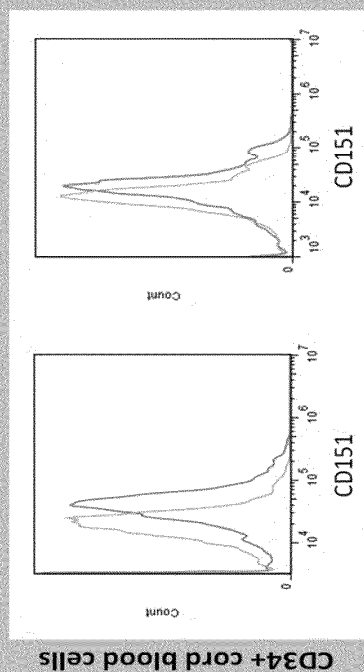


FIG. 5A

AML Cell Lines

Ab CD84 (Biolegend 326002)

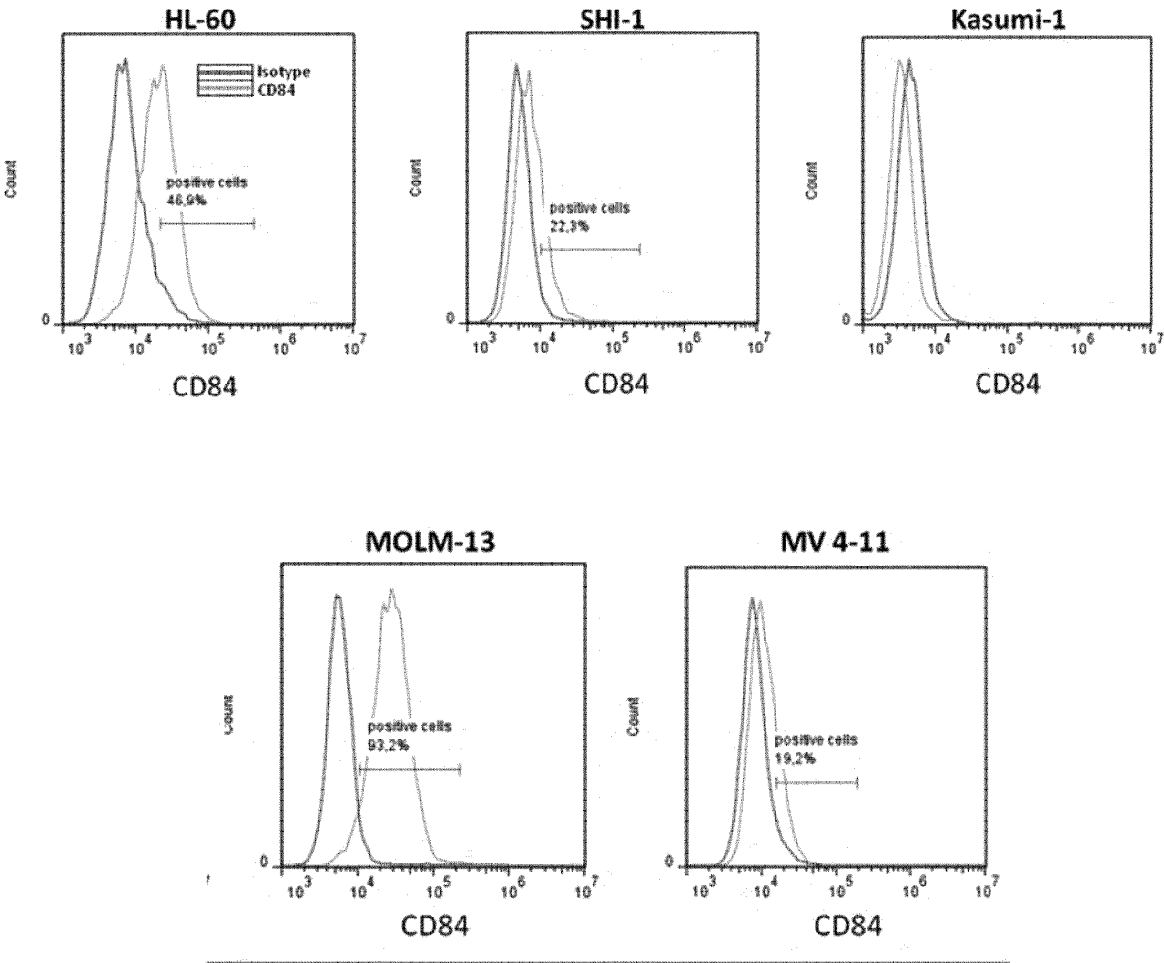


FIG. 5A (cont'd)

Ab CD84 (NOVUS NBP2-44345)

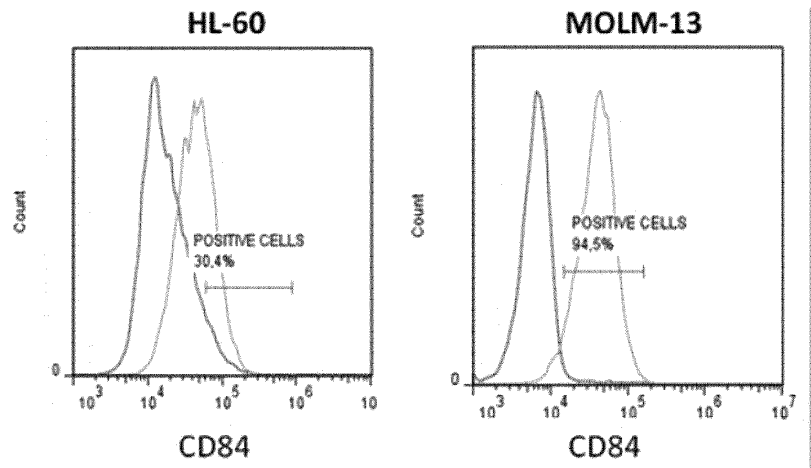


FIG. 5B

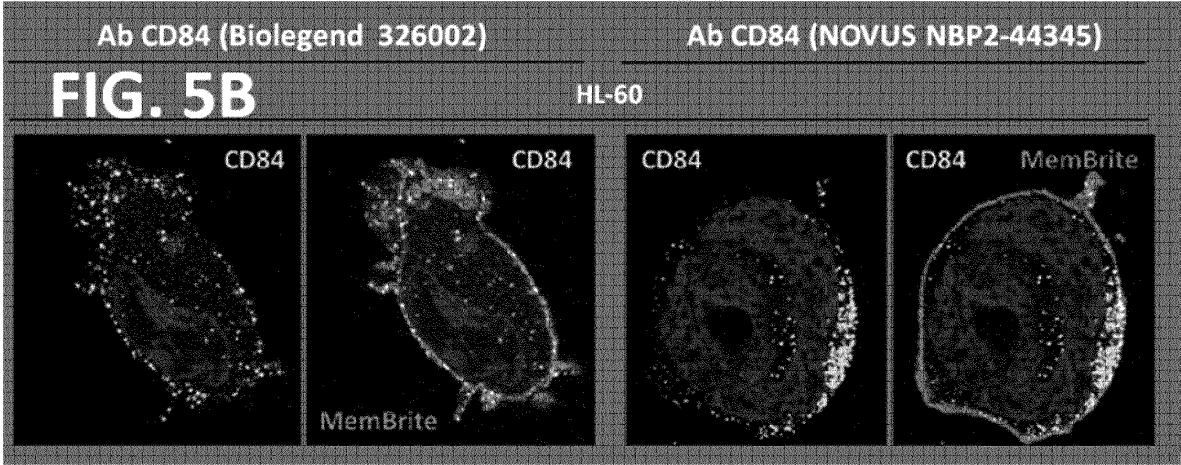


FIG. 6A

AML Cell Lines

Ab CD109 (R&D MAB4385)

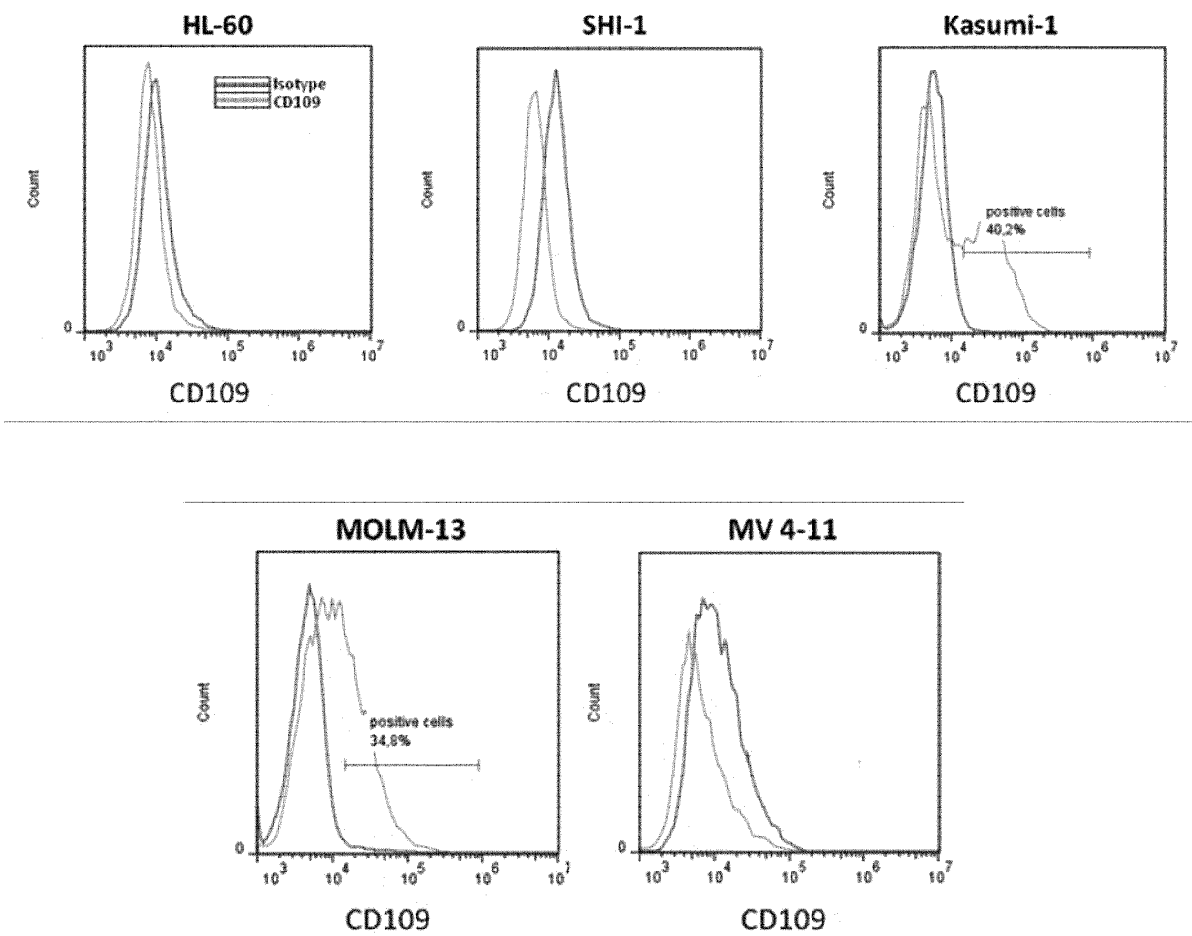


FIG. 6A (cont'd)

Ab CD109 (BD556039)

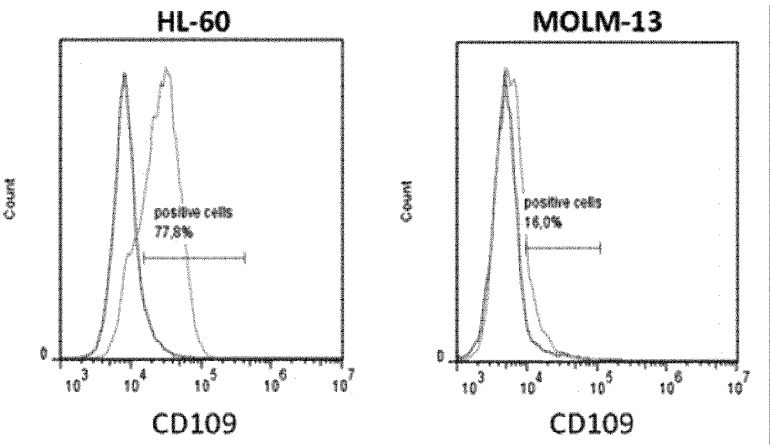


FIG. 6B

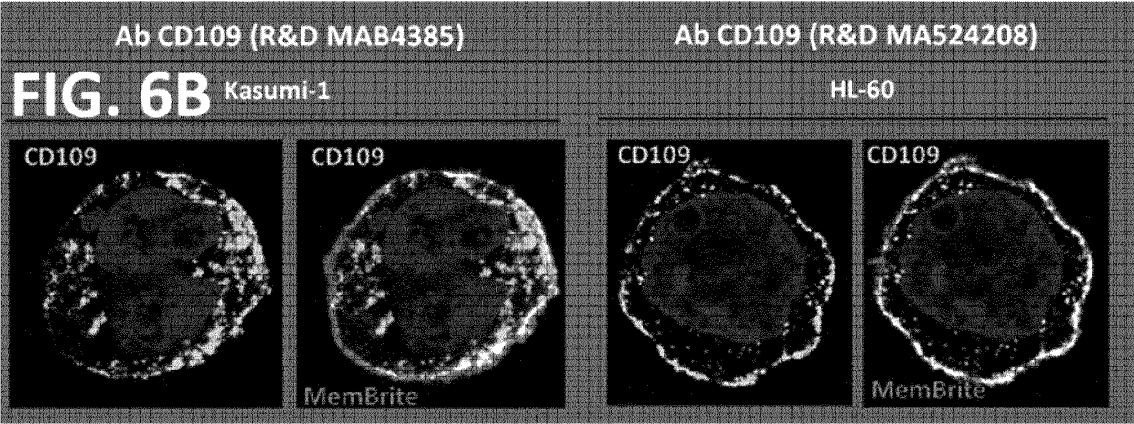


FIG. 6C

HEALTHY HEMATOPOIETIC CELLS

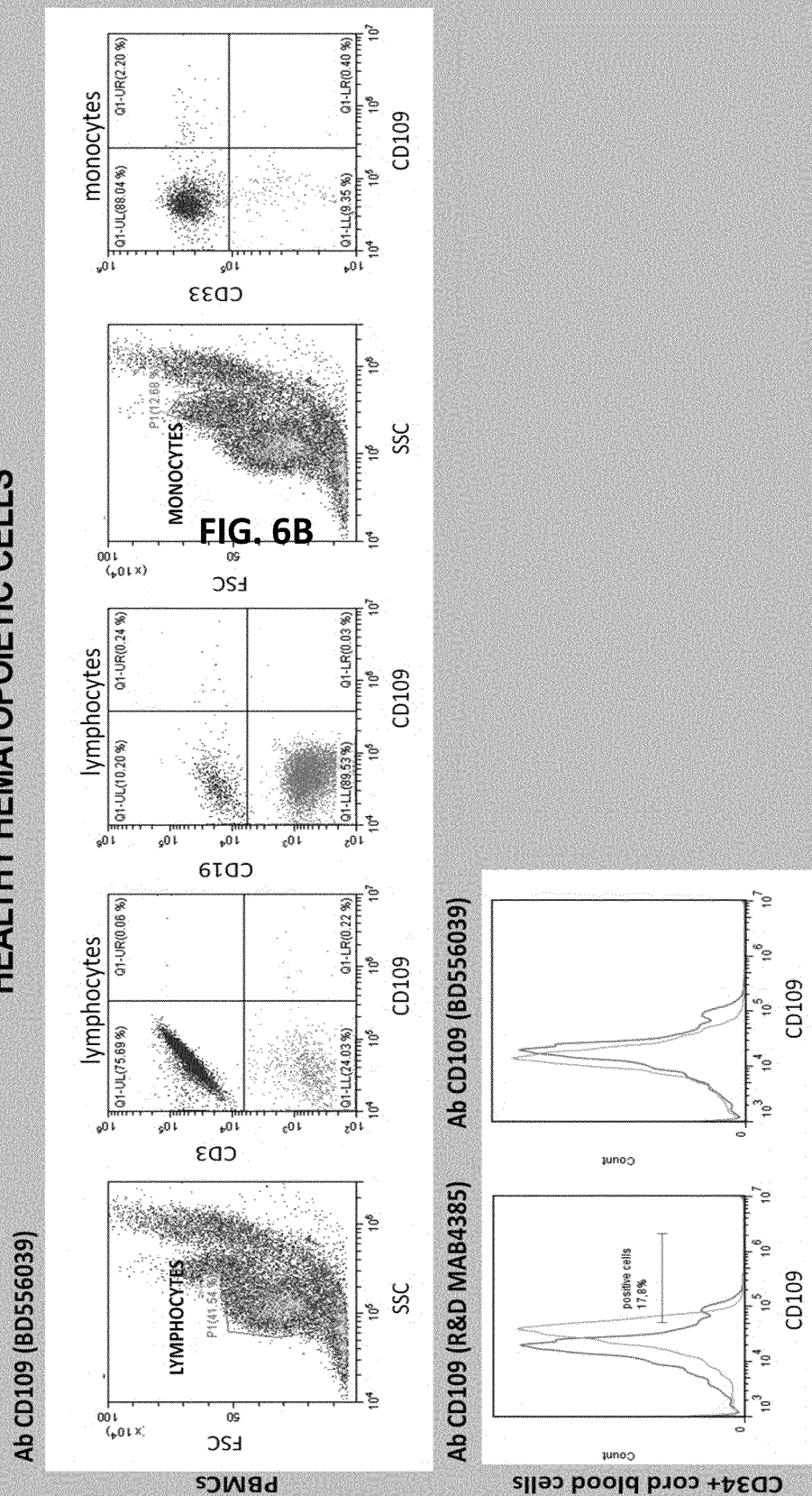


FIG. 7A

AML Cell Lines

Ab CD72 (Biolegend 316202)

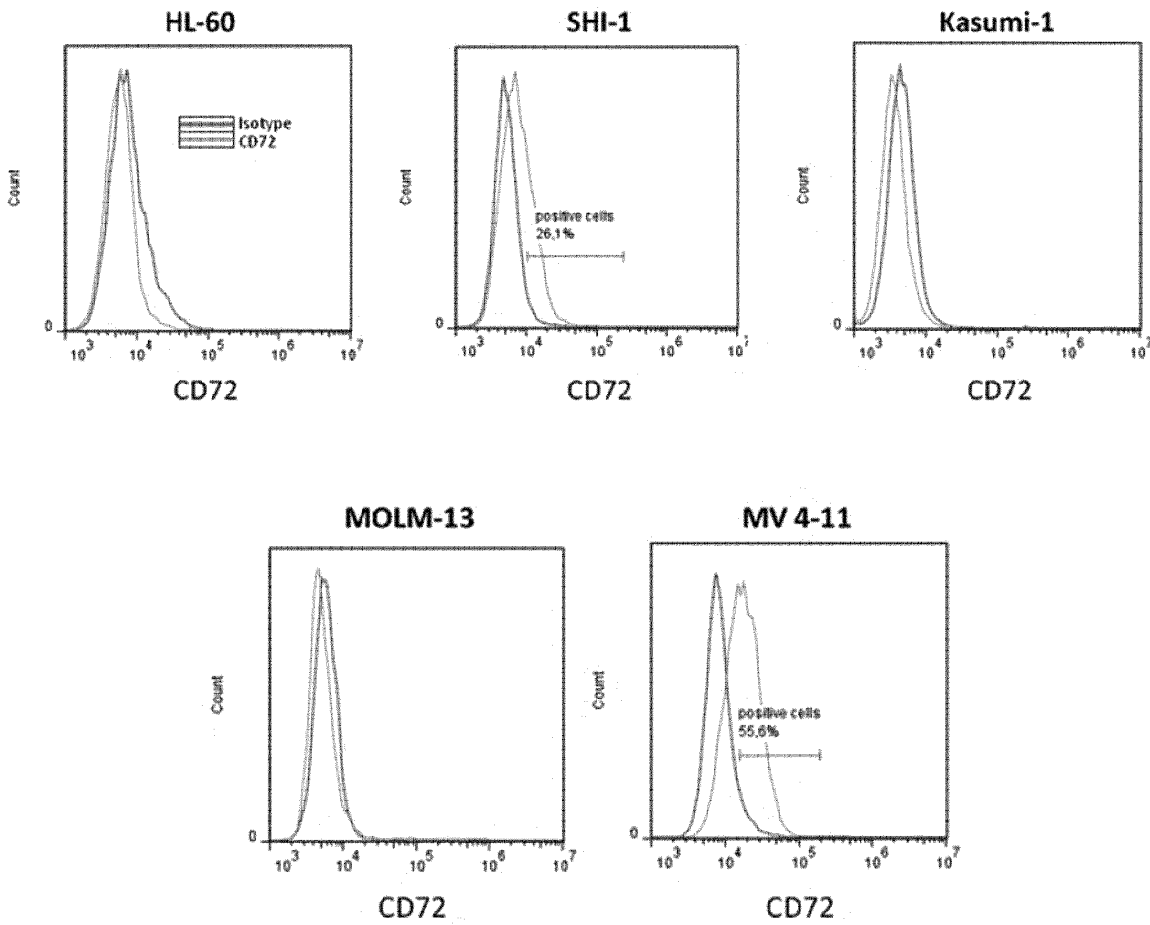


FIG. 7A (cont'd)

Ab CD72 (BD 555917)

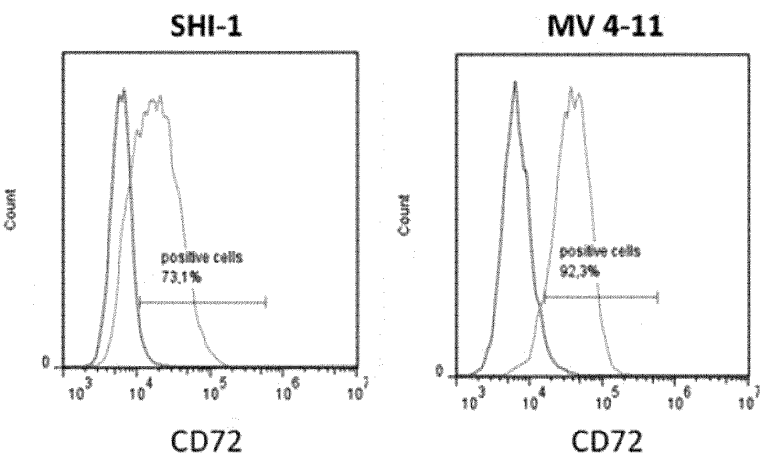


FIG. 7B

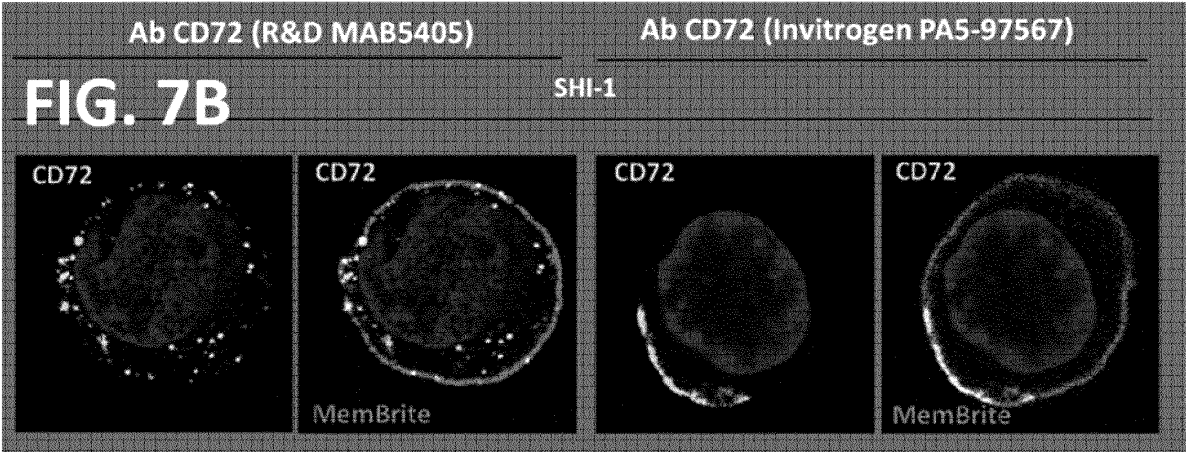
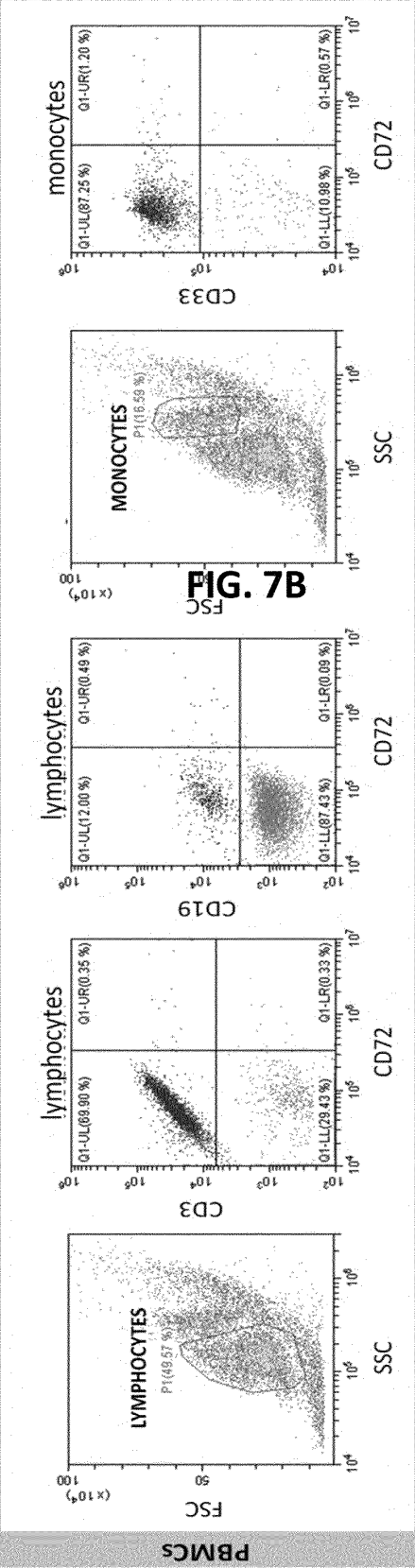


FIG. 7C

HEALTHY HEMATOPOIETIC CELLS

Ab CD72 (Biolegend 316202)



Ab CD72 (Biolegend 316202)

Ab CD72 (R&D MAB5405)

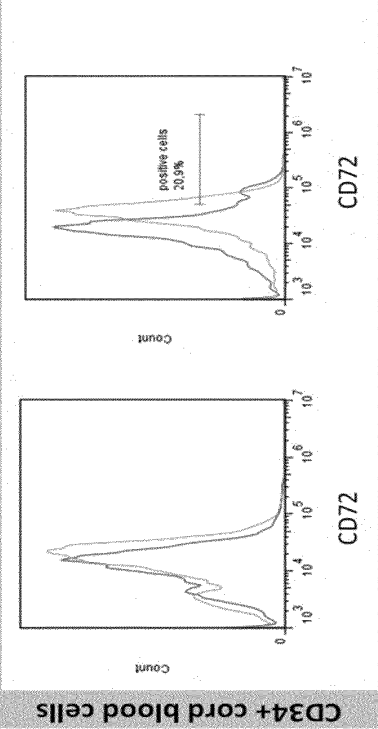


FIG. 8

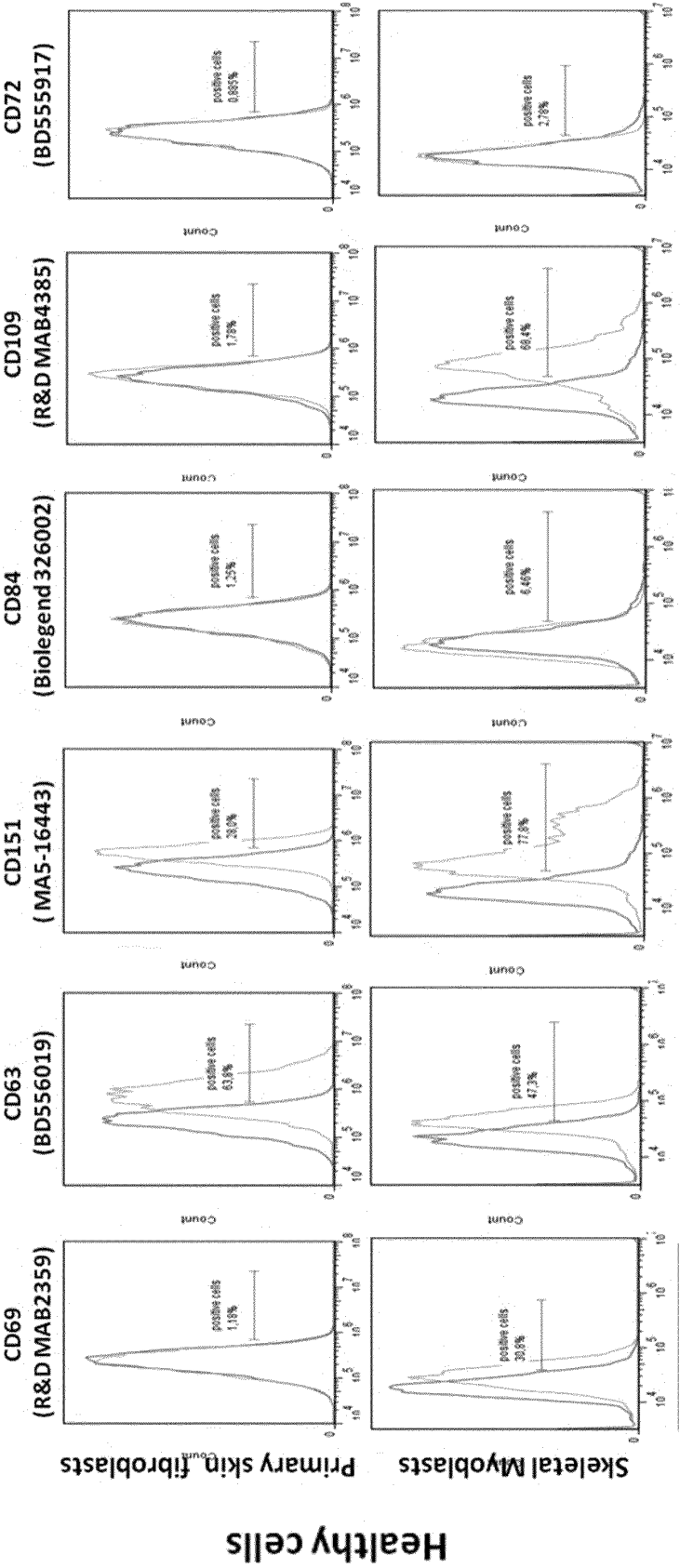


FIG. 8 (cont'd)

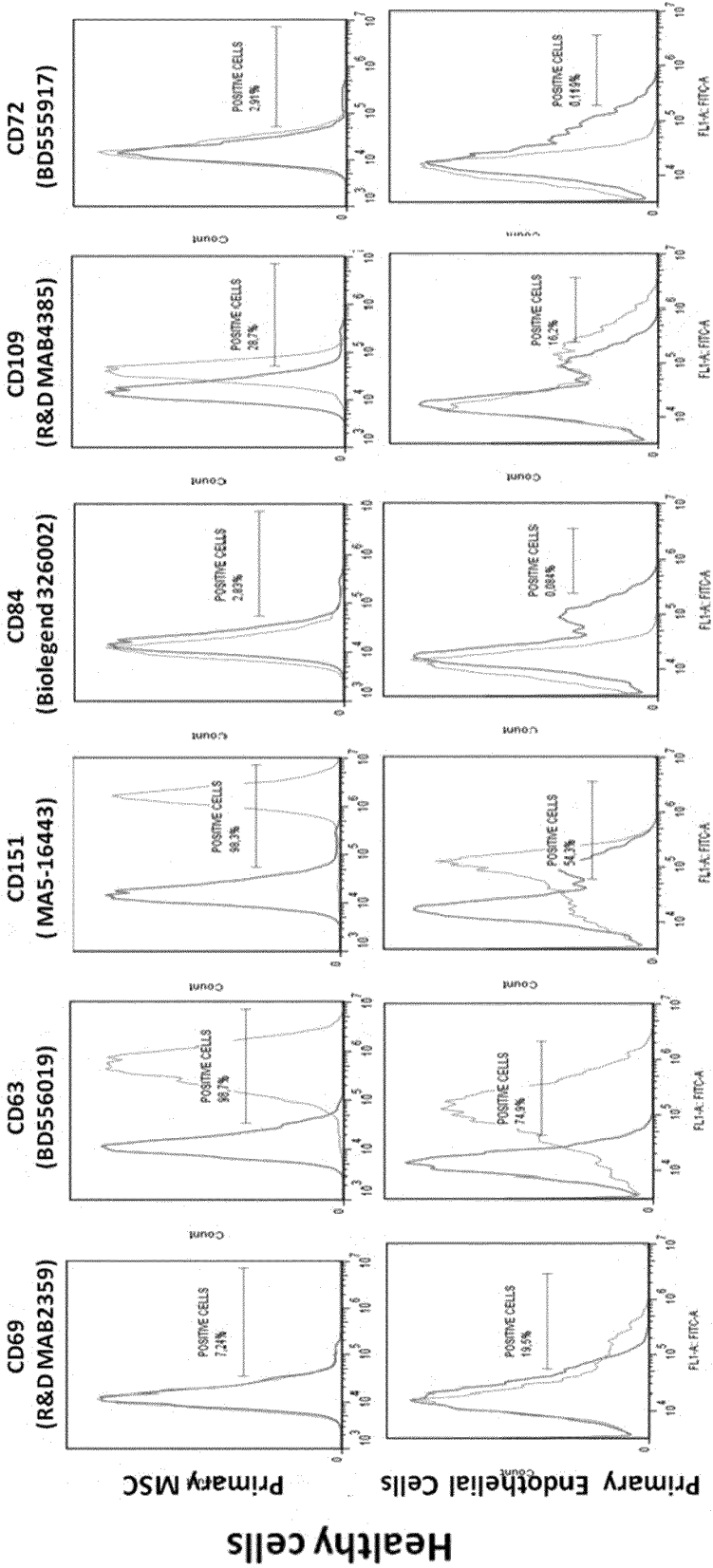


FIG. 9

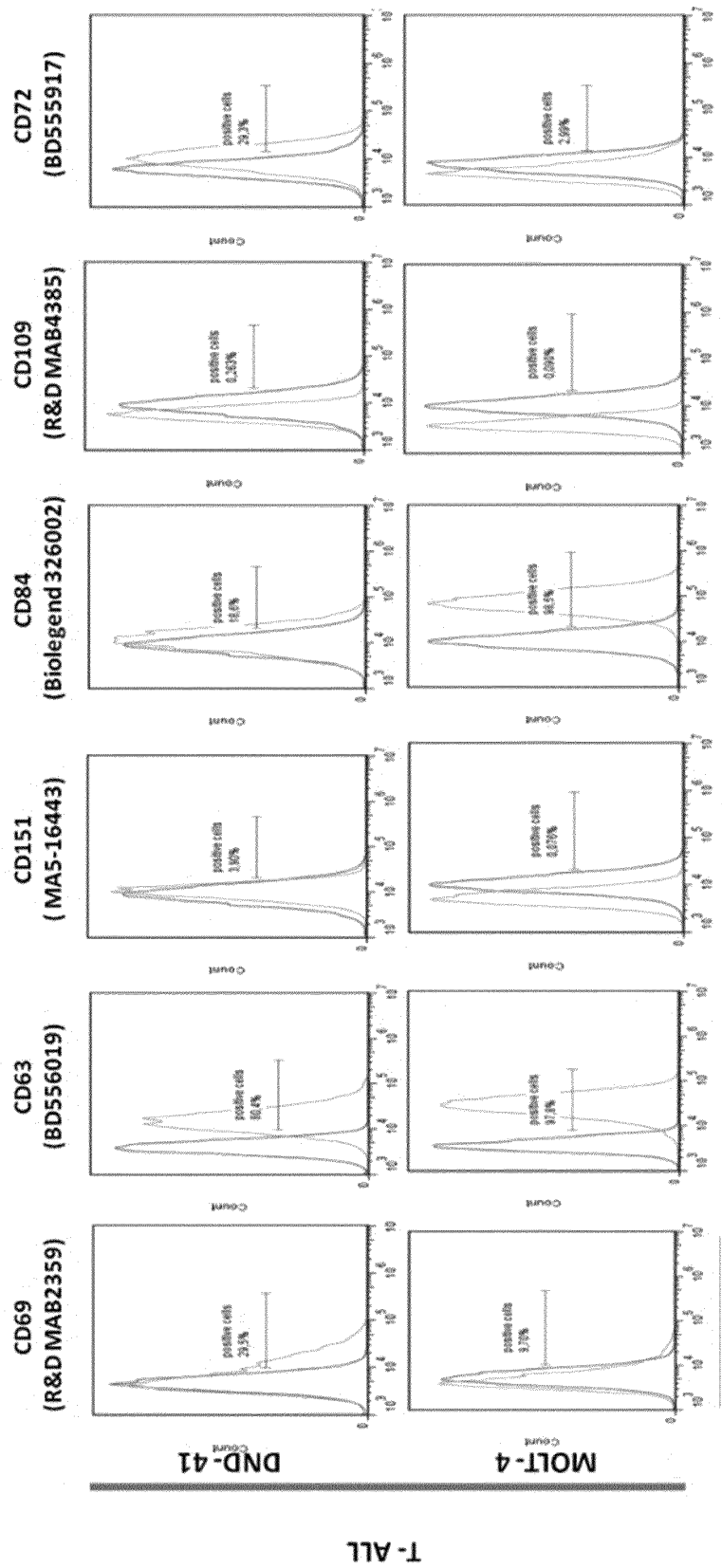


FIG. 9 (cont'd)

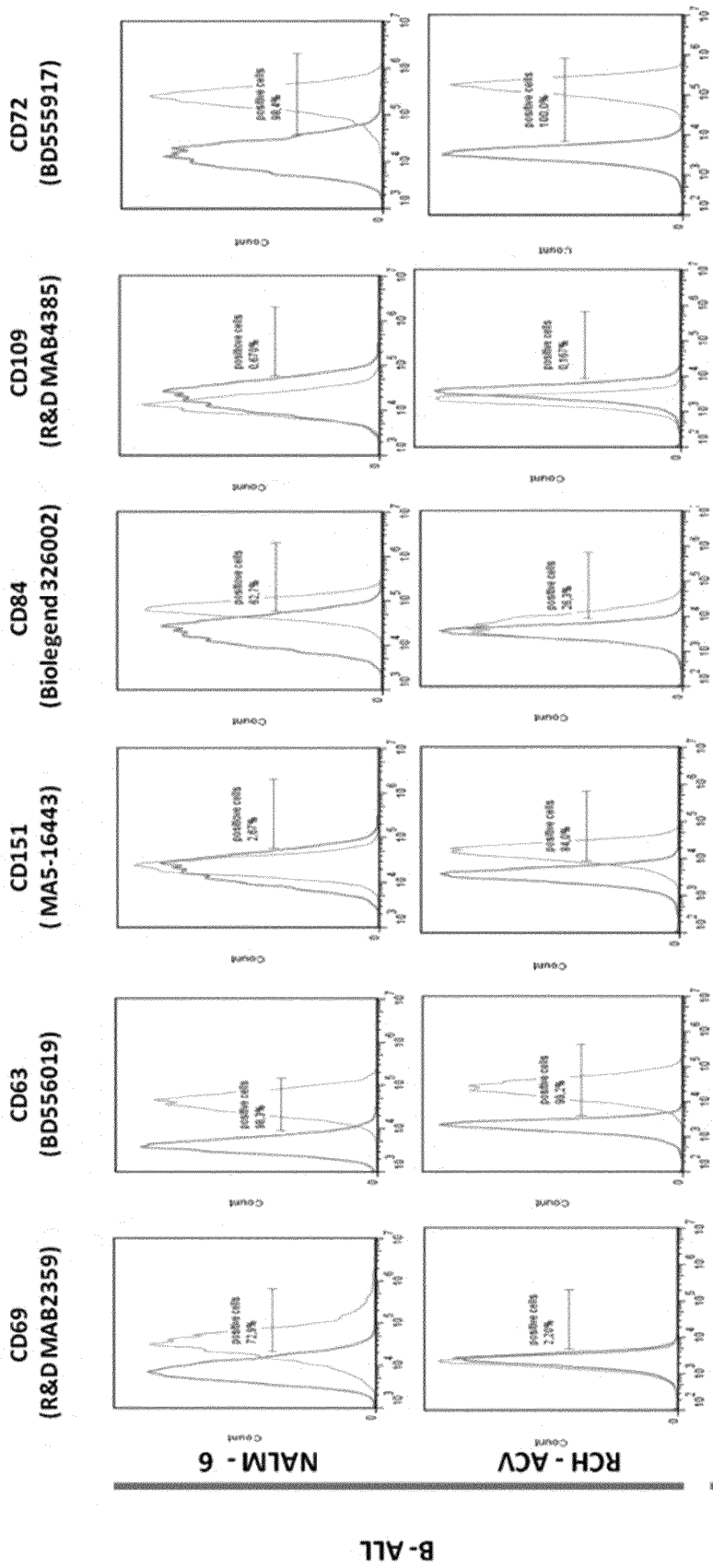


FIG. 9 (cont'd)

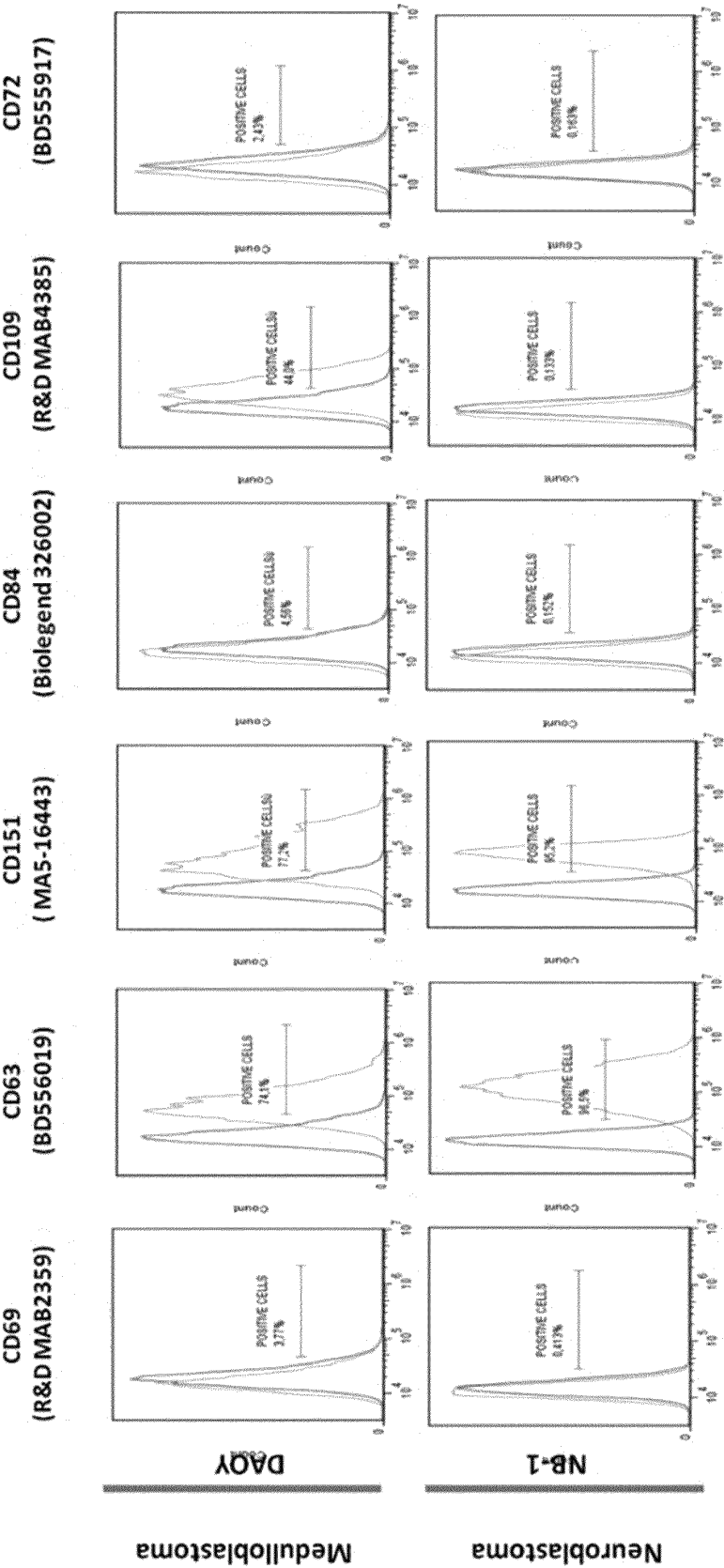


FIG. 9 (cont'd)

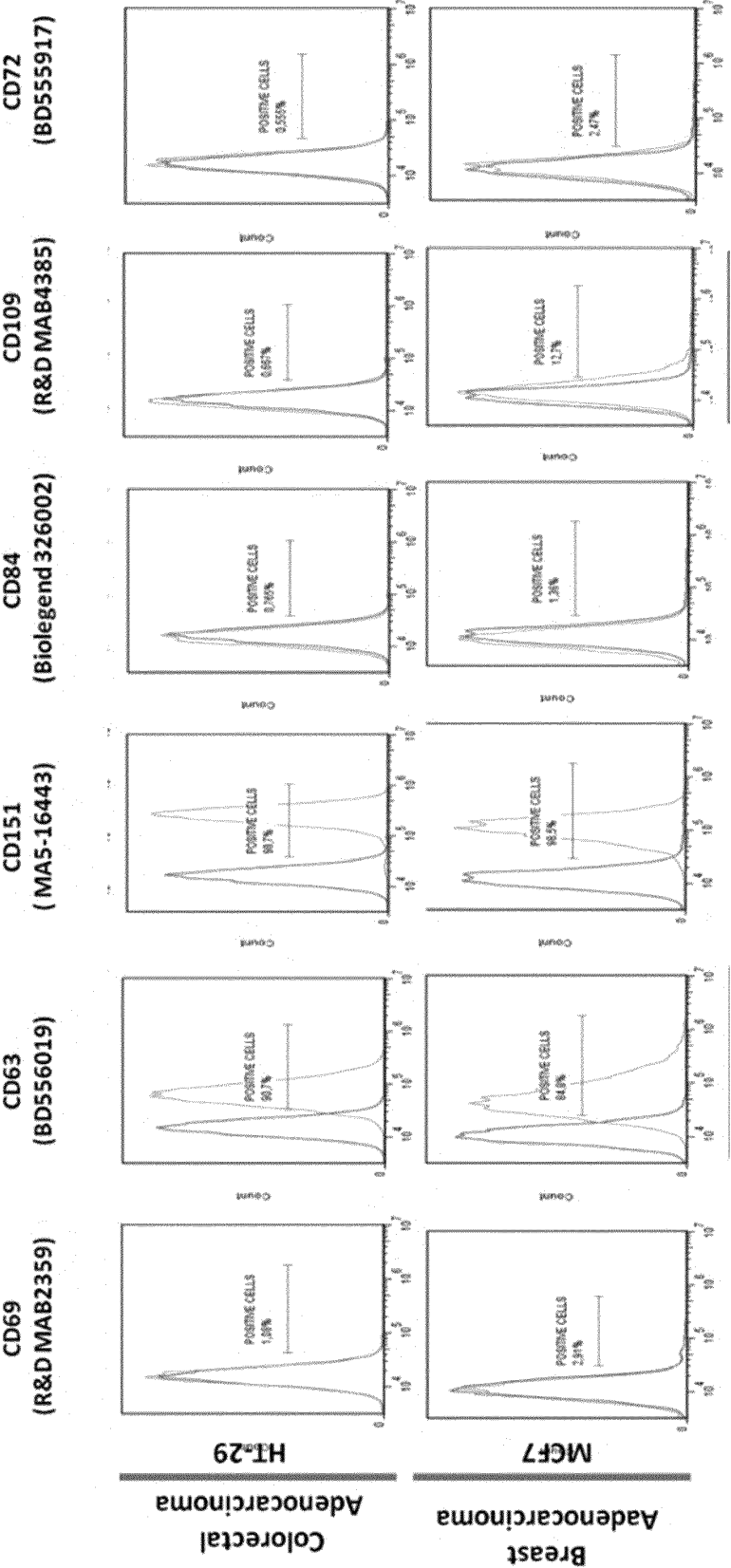


FIG. 9 (cont'd)

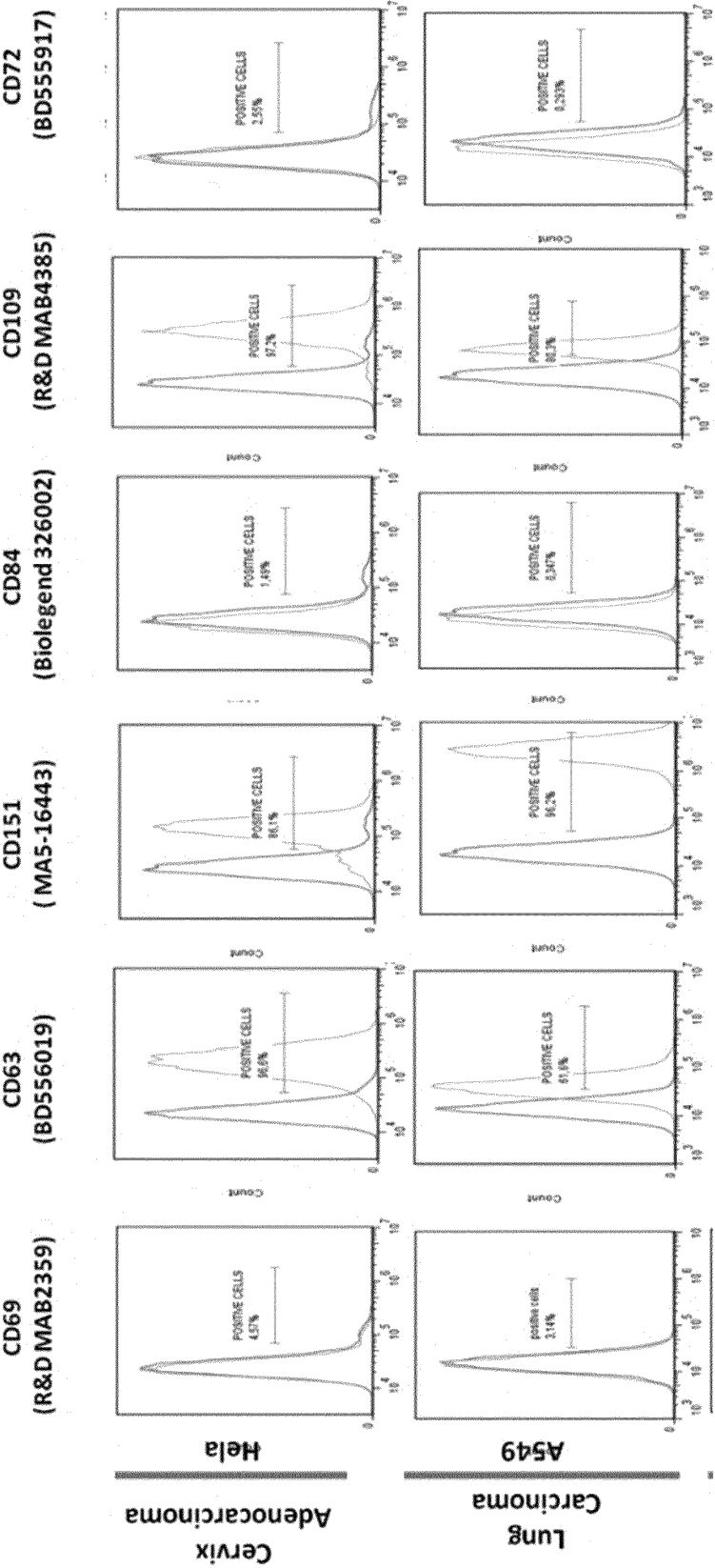


FIG. 9 (cont'd)

CD69 (R&D MAB2359) CD63 (BD556019) CD151 (MA5-16443) CD84 (Biolegend 326002) CD109 (R&D MAB4385) CD72 (BD555917)

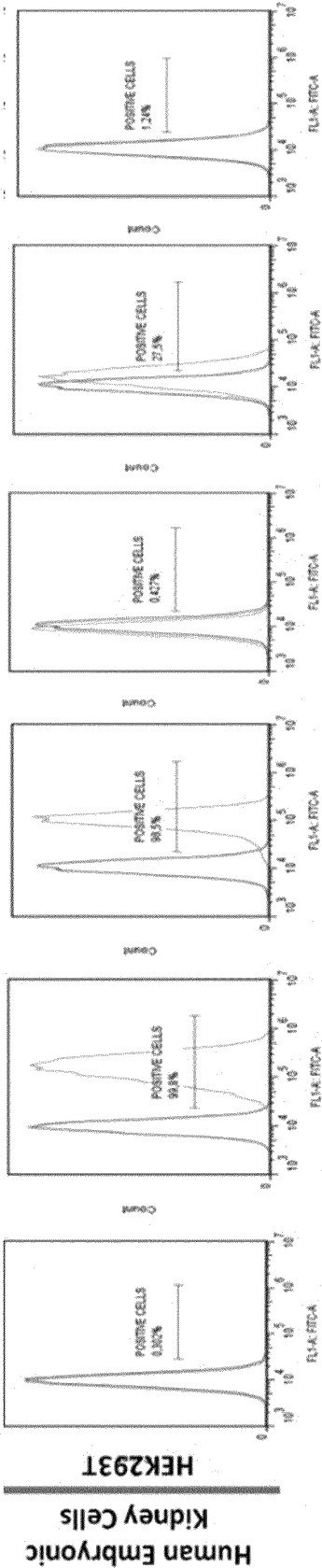


FIG. 10

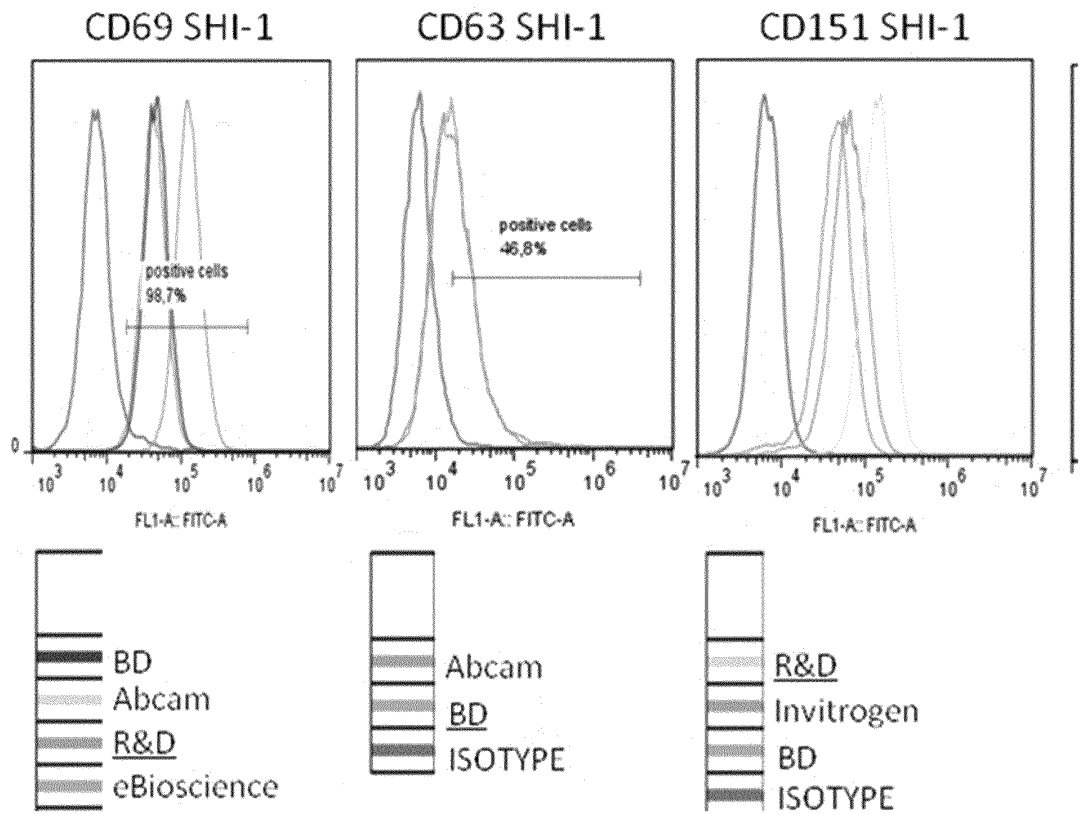


FIG. 10 (Continued)

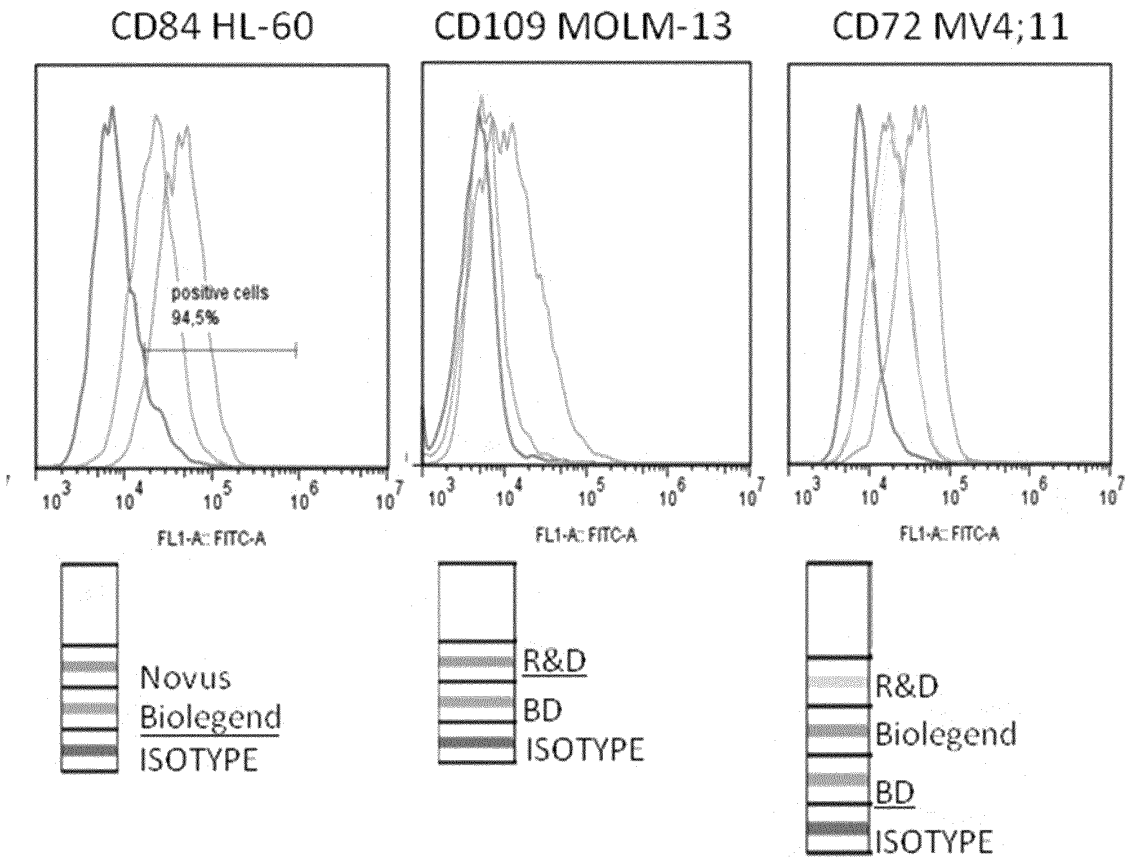


FIG. 11

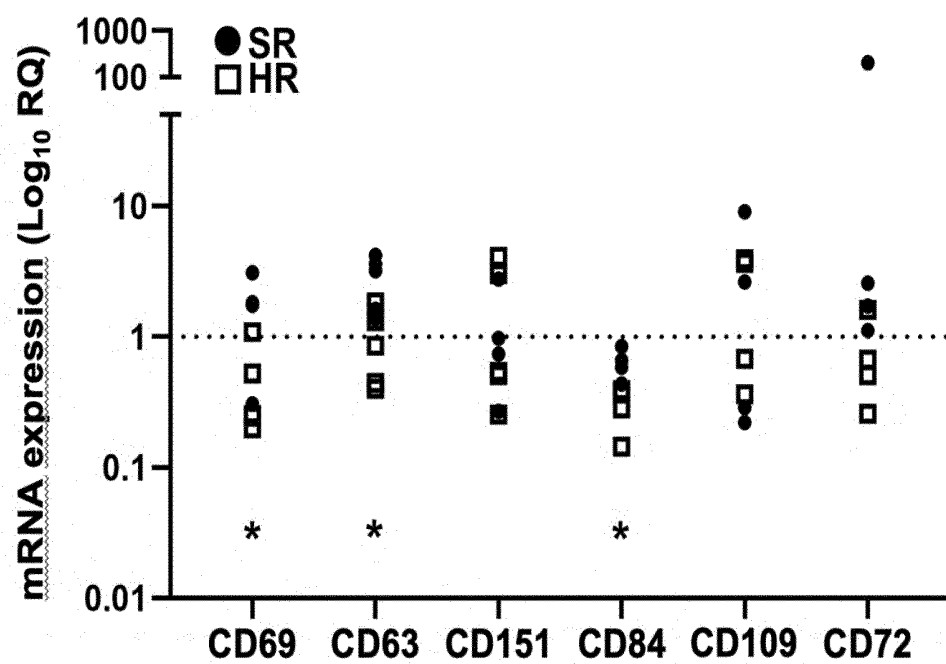


FIG. 12A

TSA expression in healthy CD34⁺CD38⁻

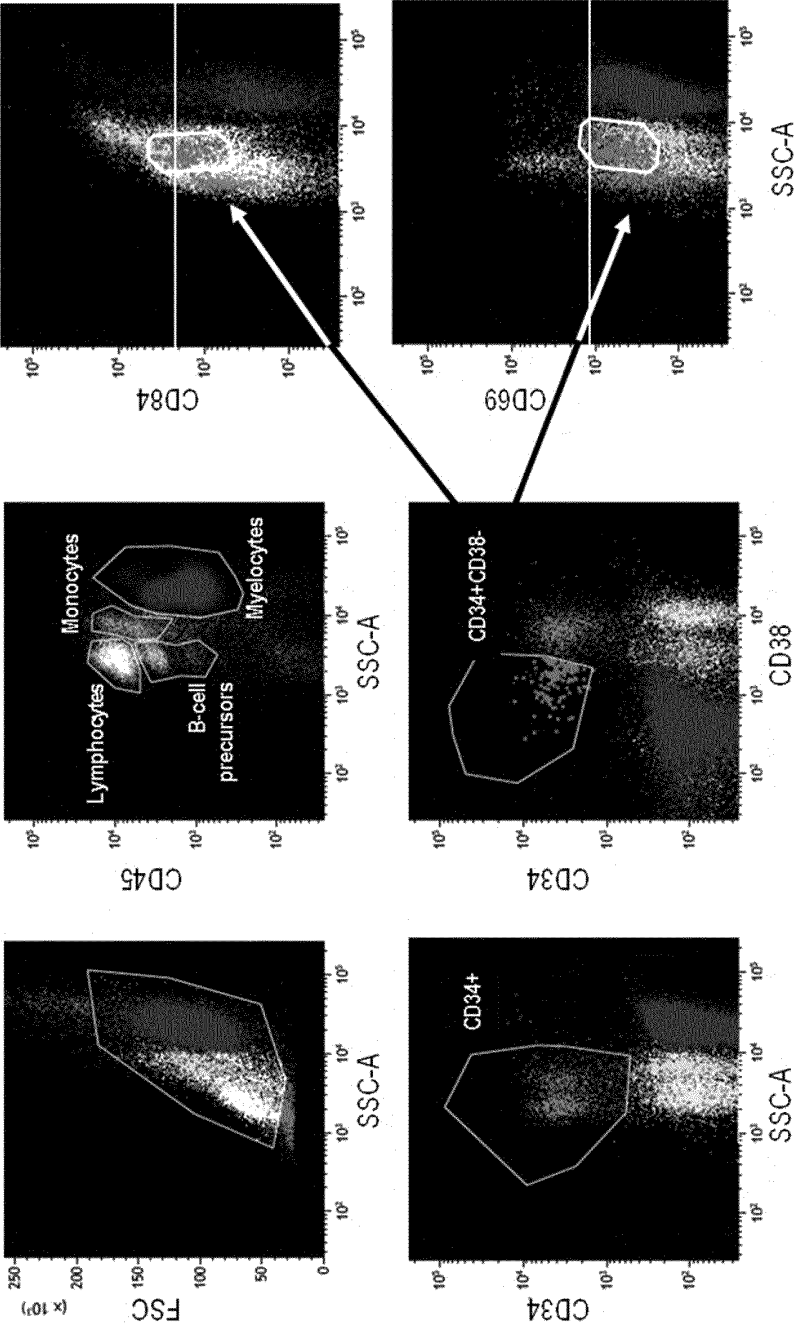


FIG. 12B

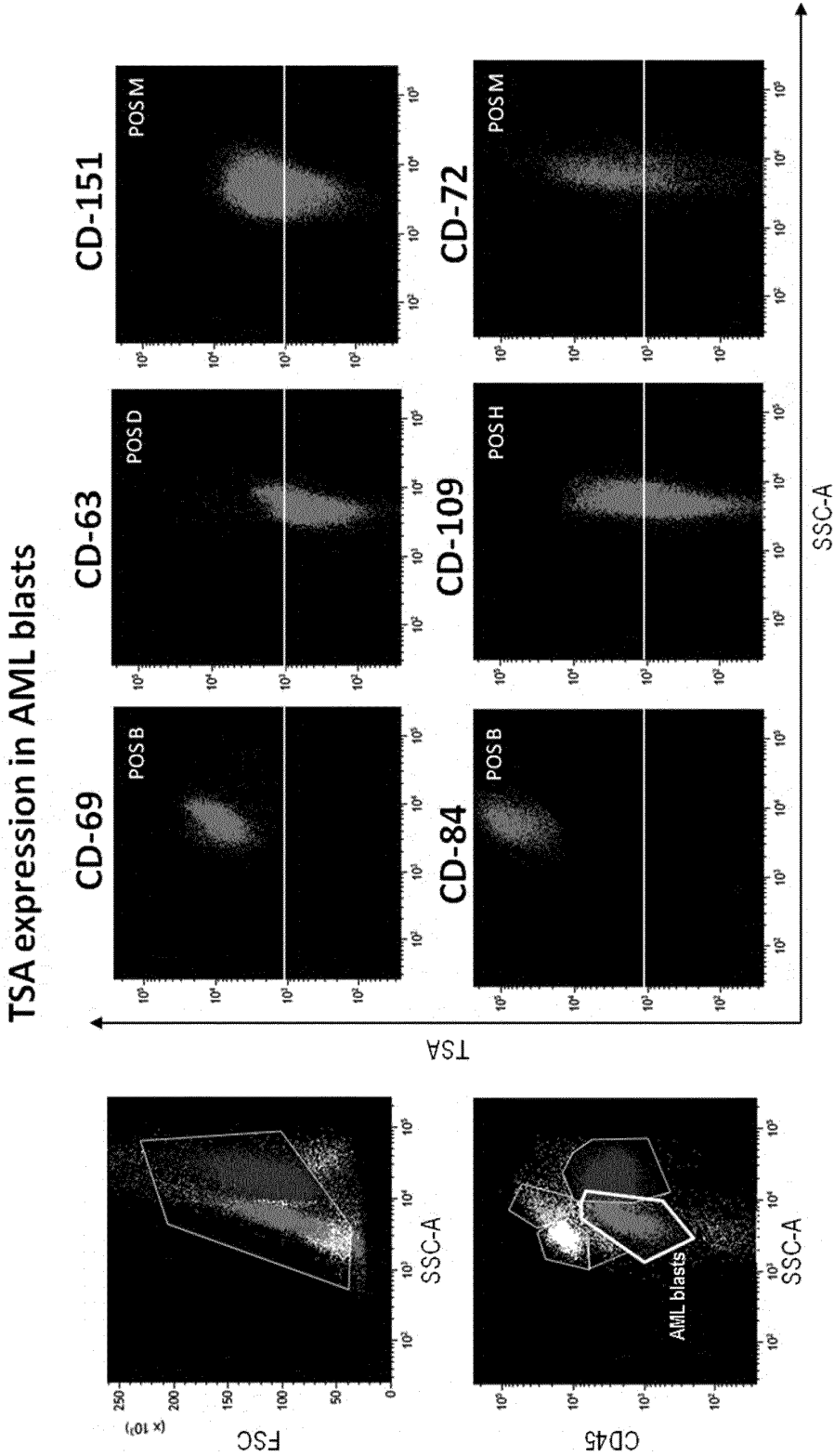


FIG. 13

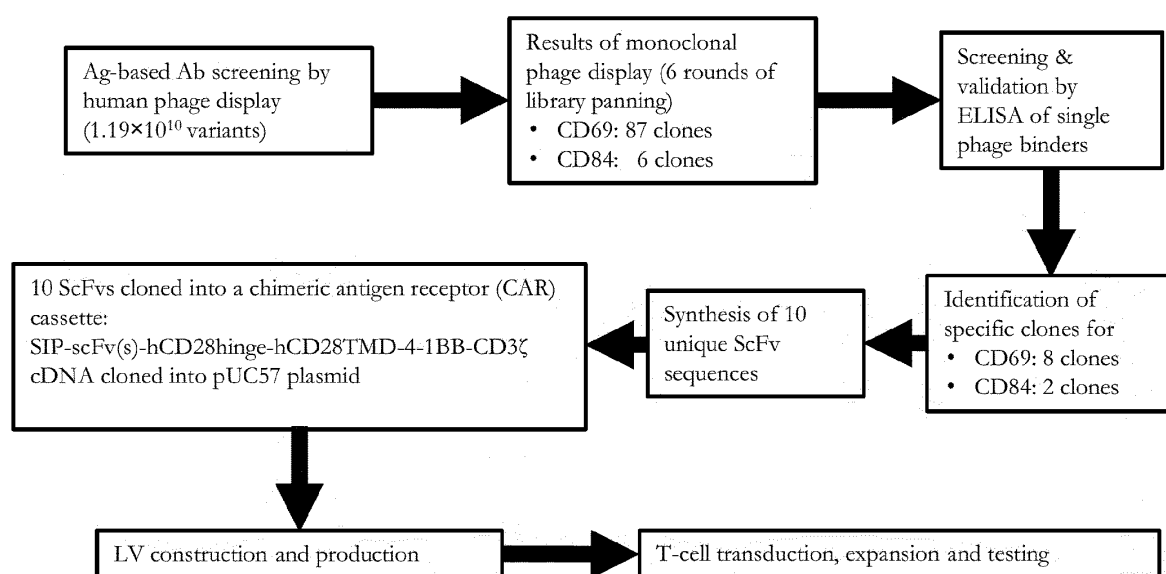


FIG. 14

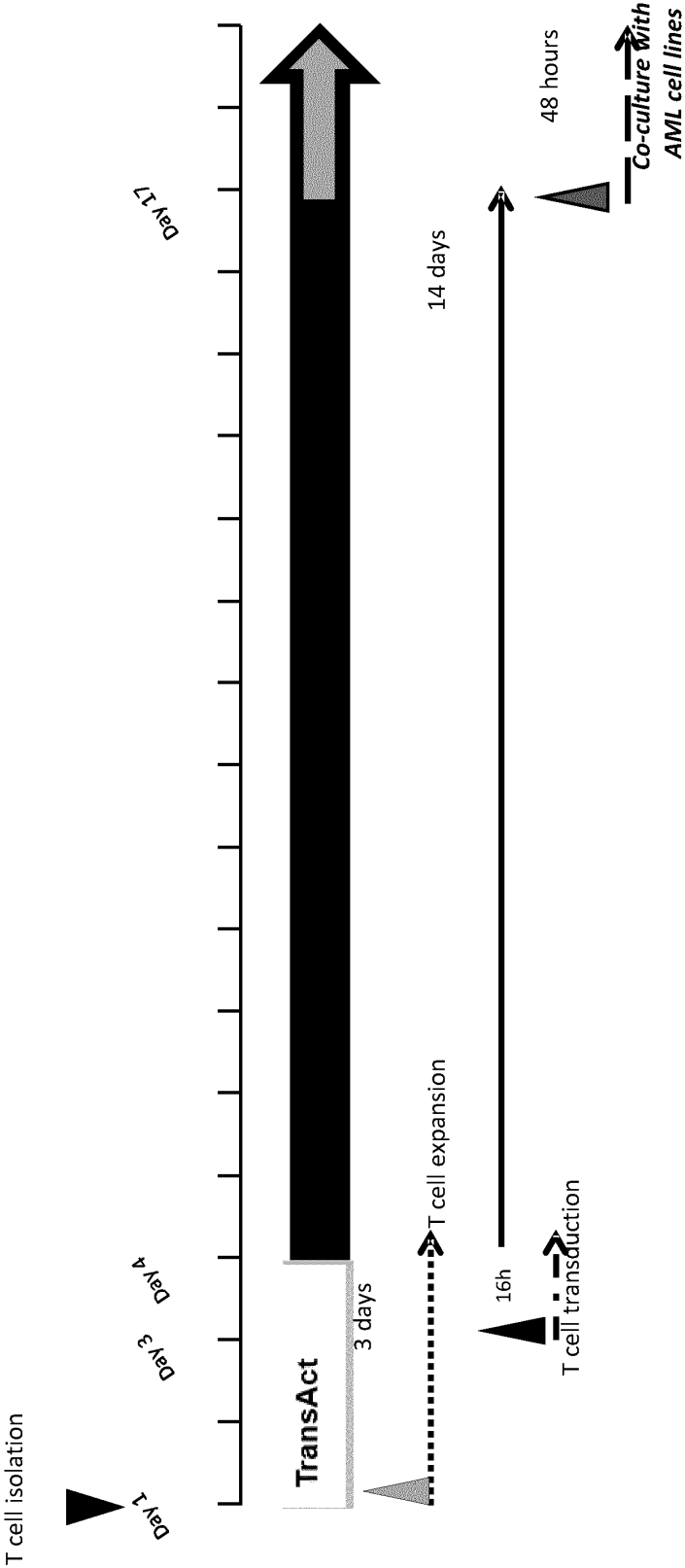


FIG. 15

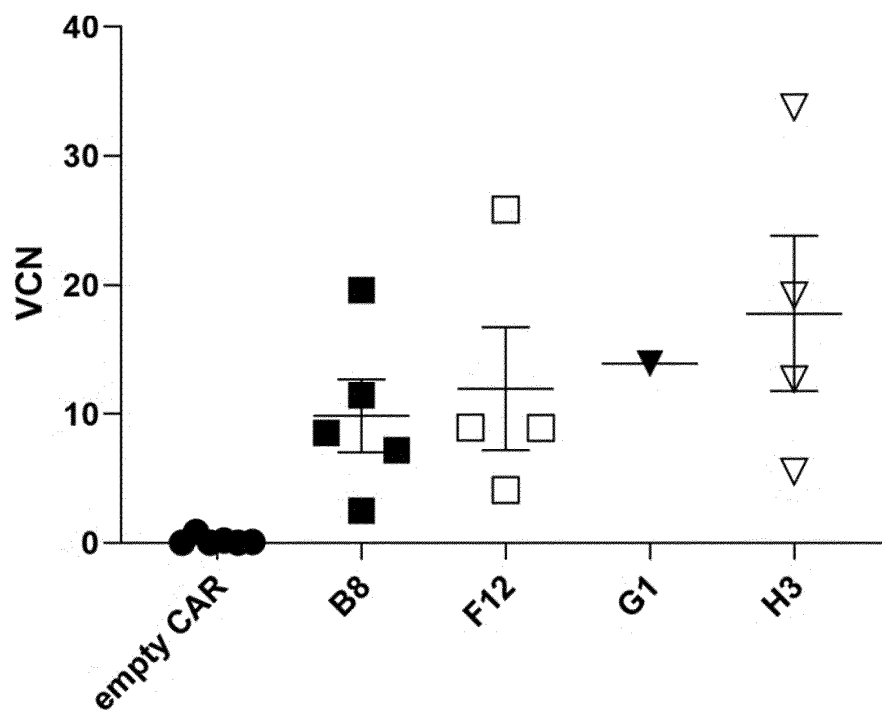


FIG. 16

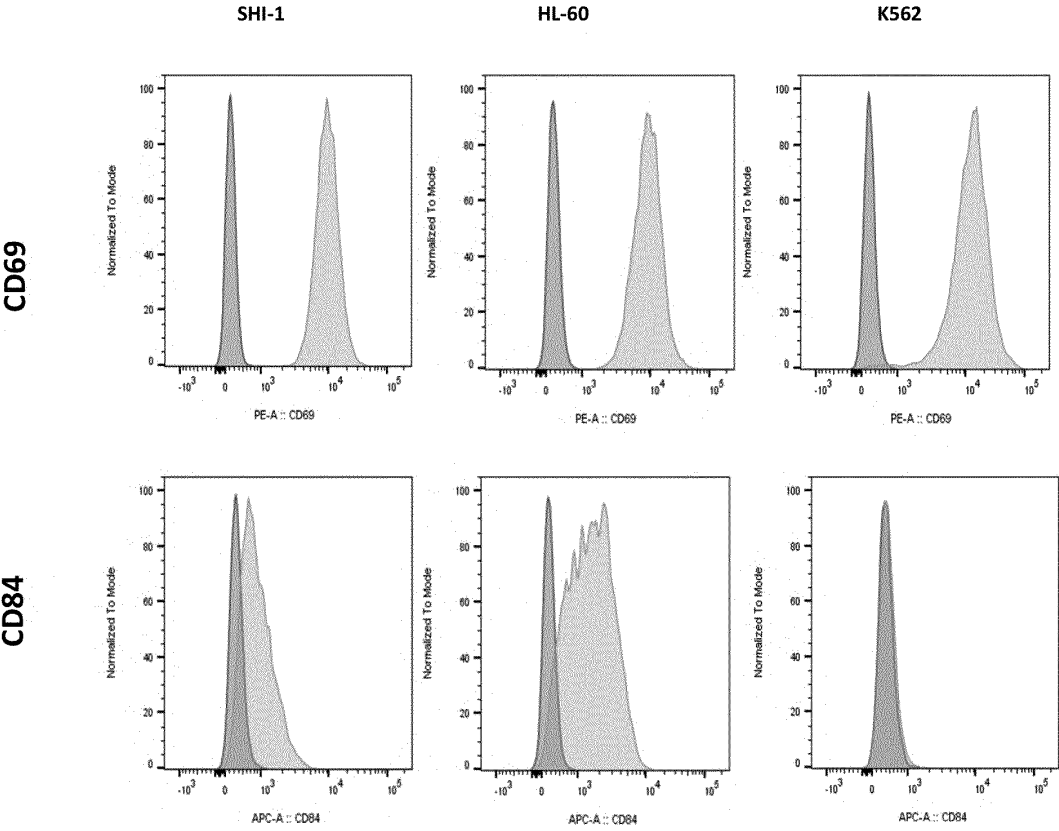


FIG. 16 (continued)

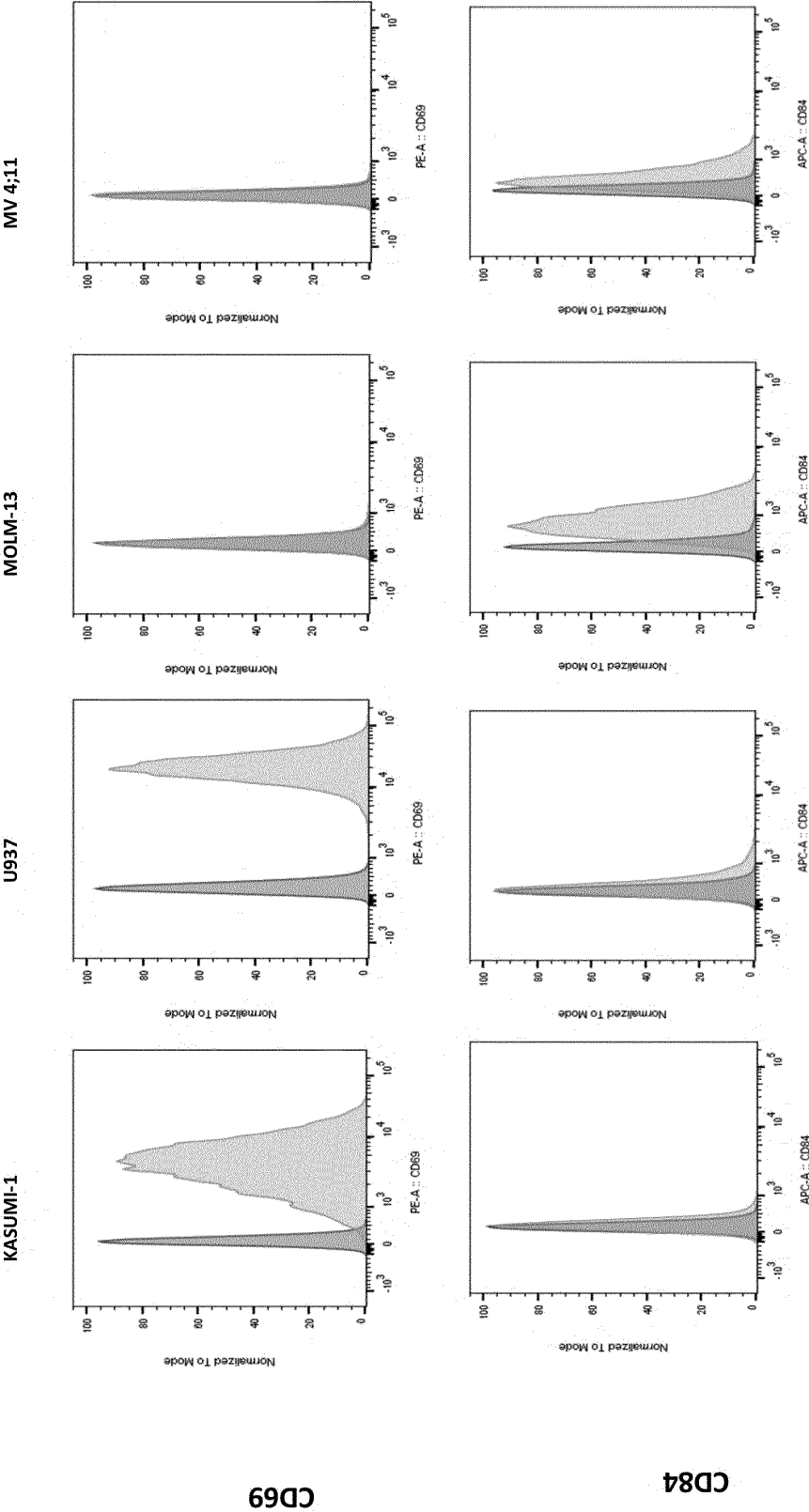


FIG. 17

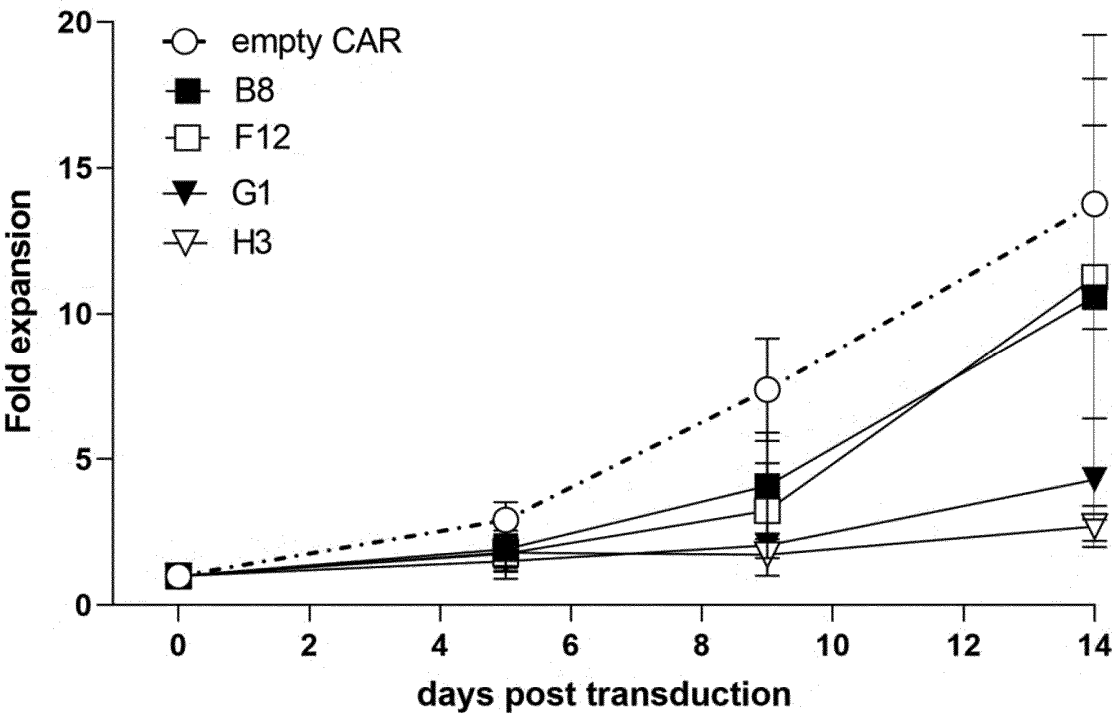


FIG. 18A

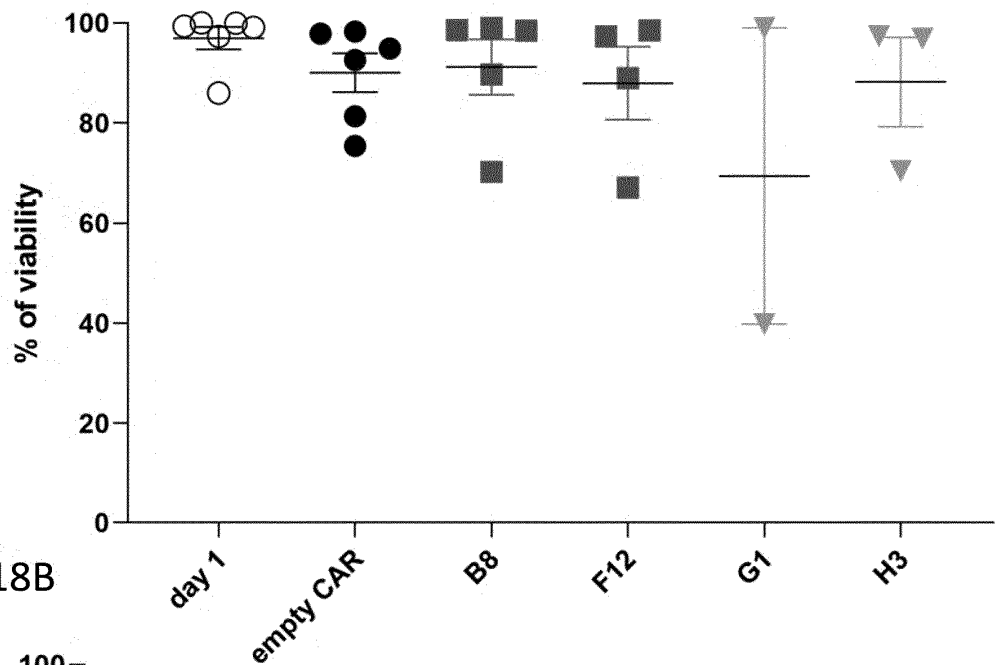


FIG. 18B

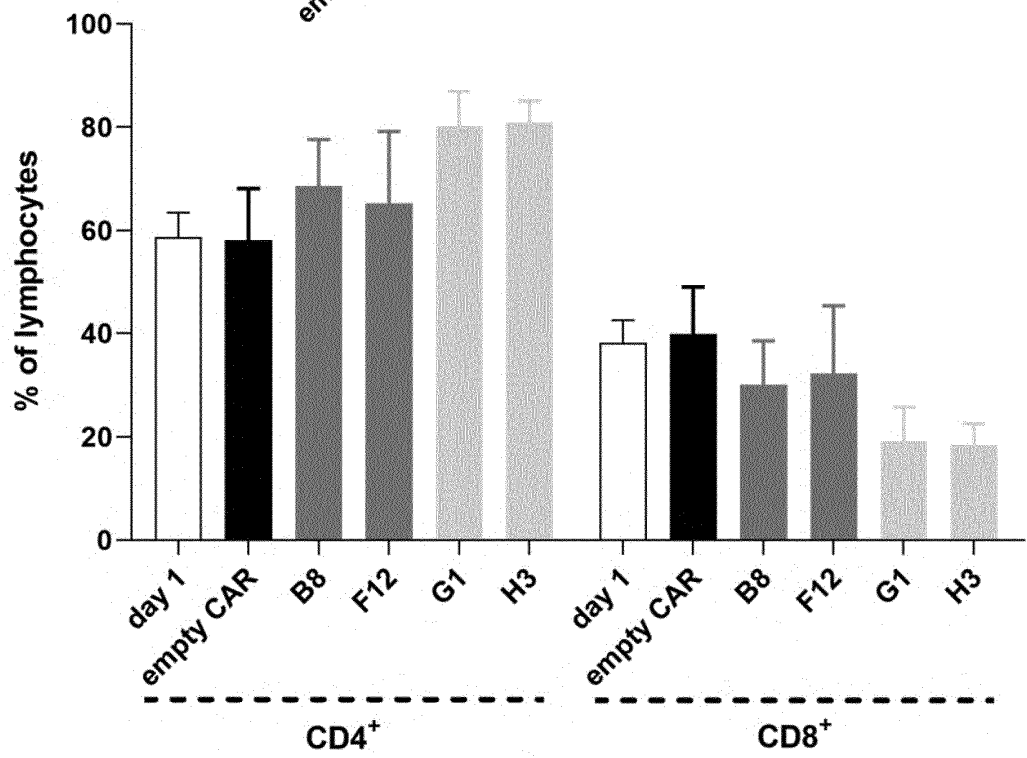


FIG. 19A

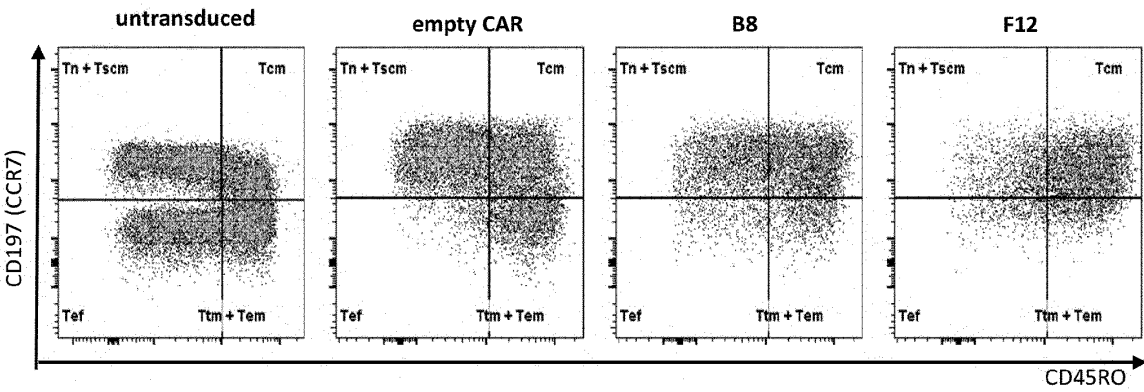


FIG. 19B

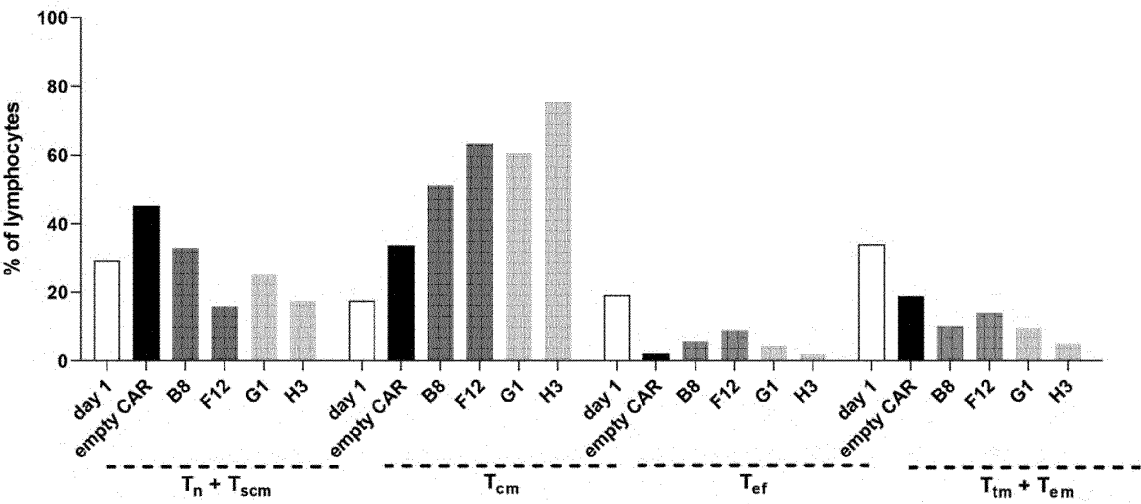


FIG. 20A

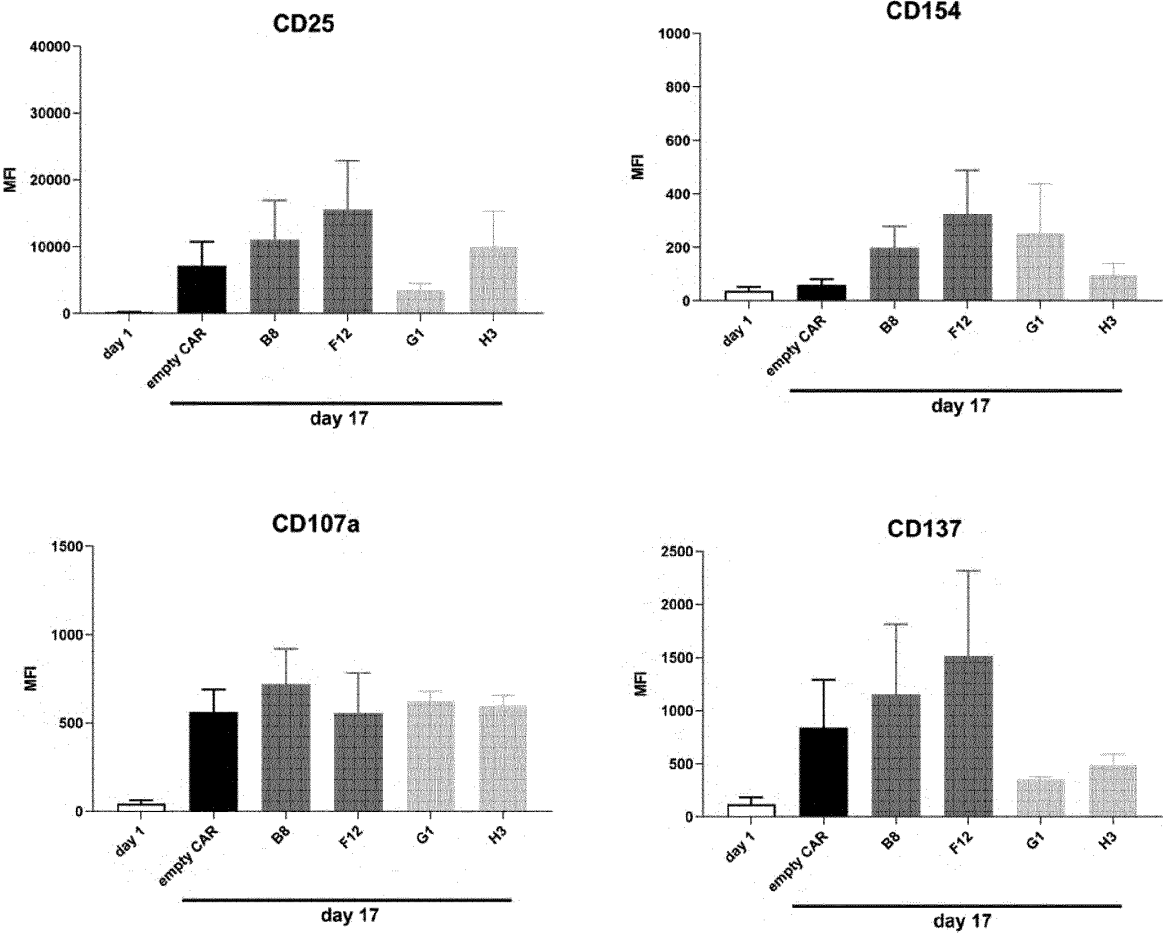


FIG. 20B

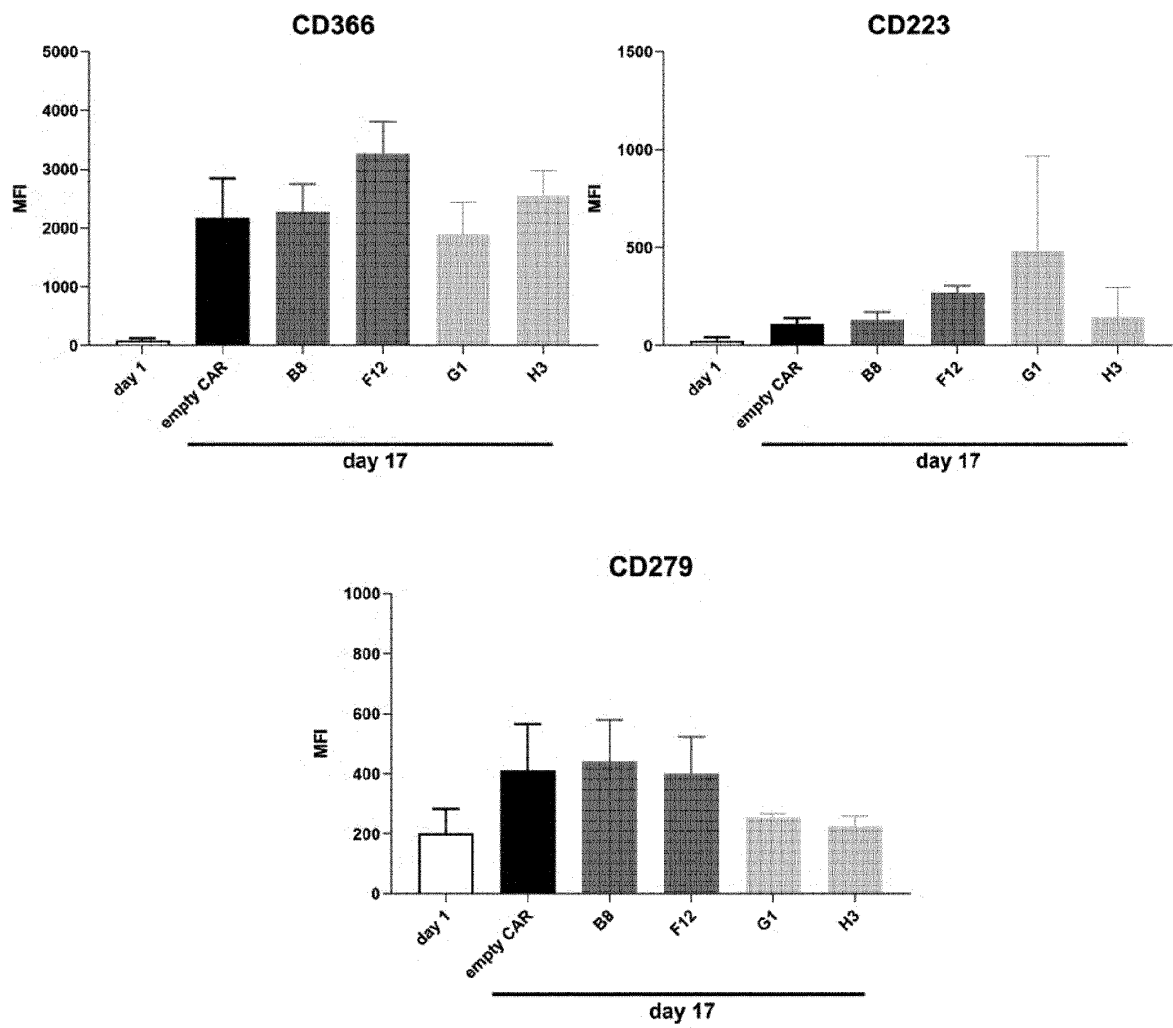


FIG. 21

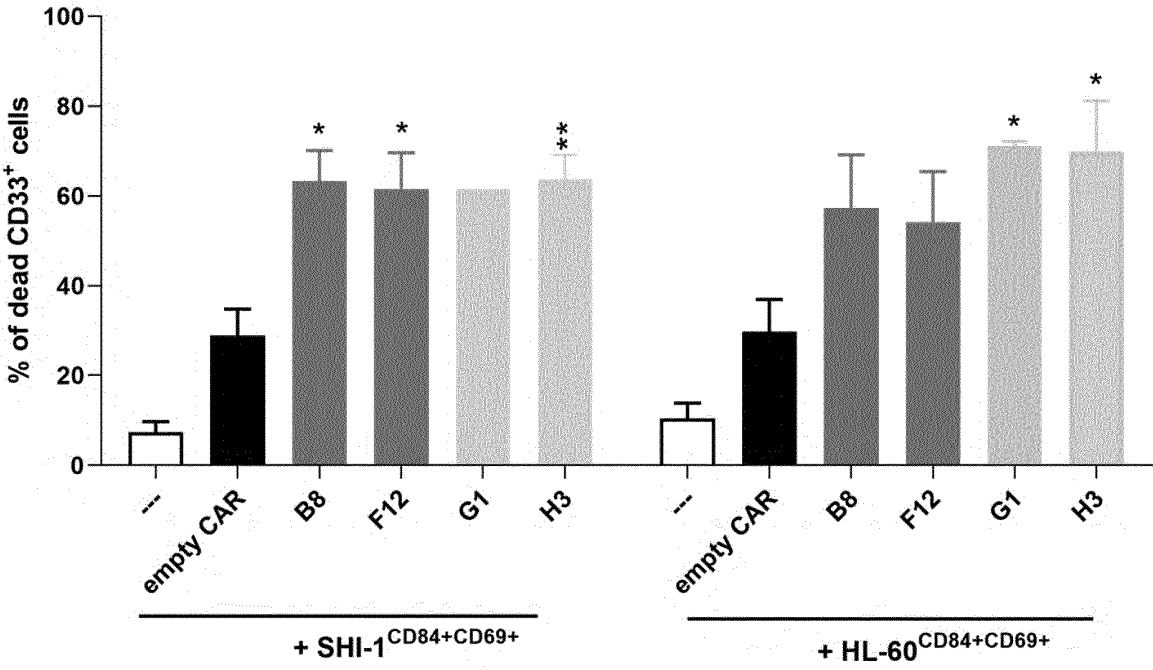


FIG. 22

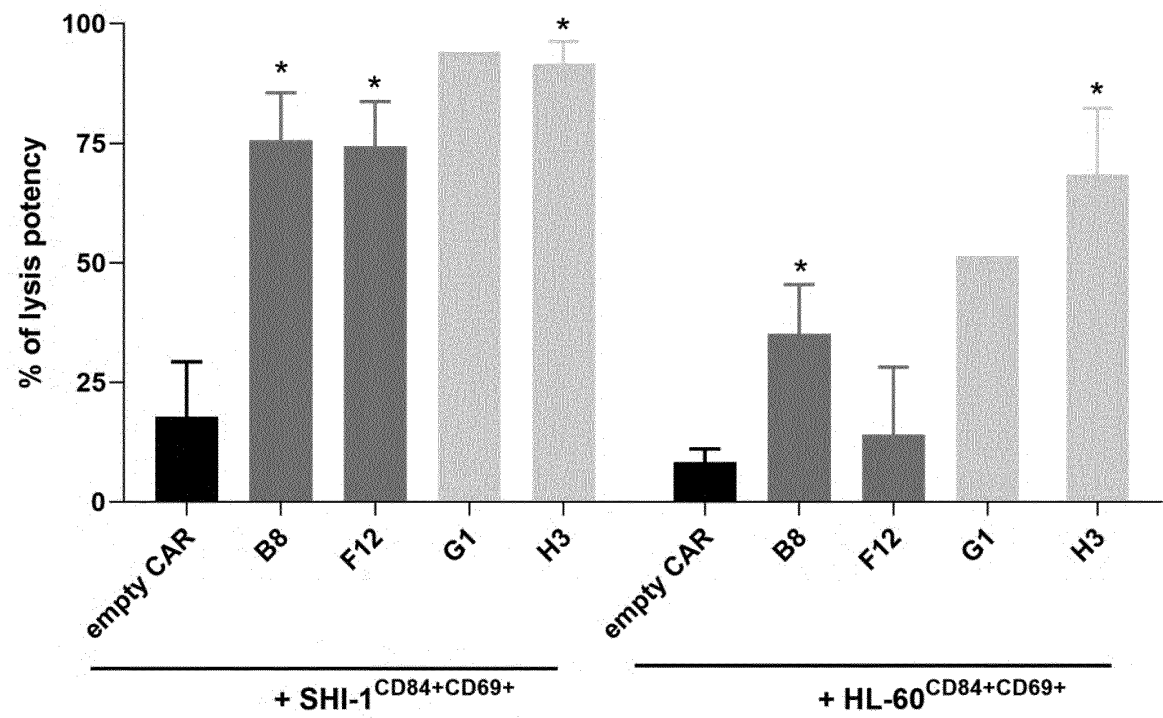


FIG. 23

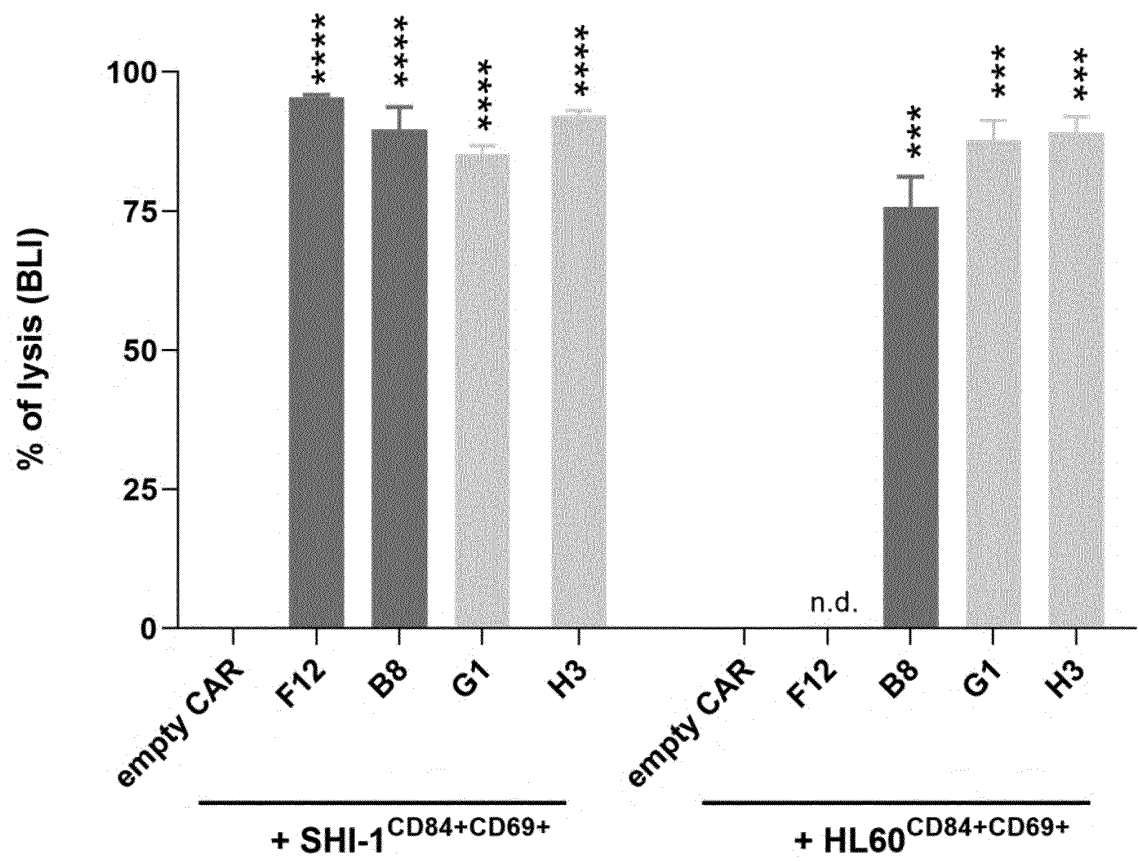


FIG. 24

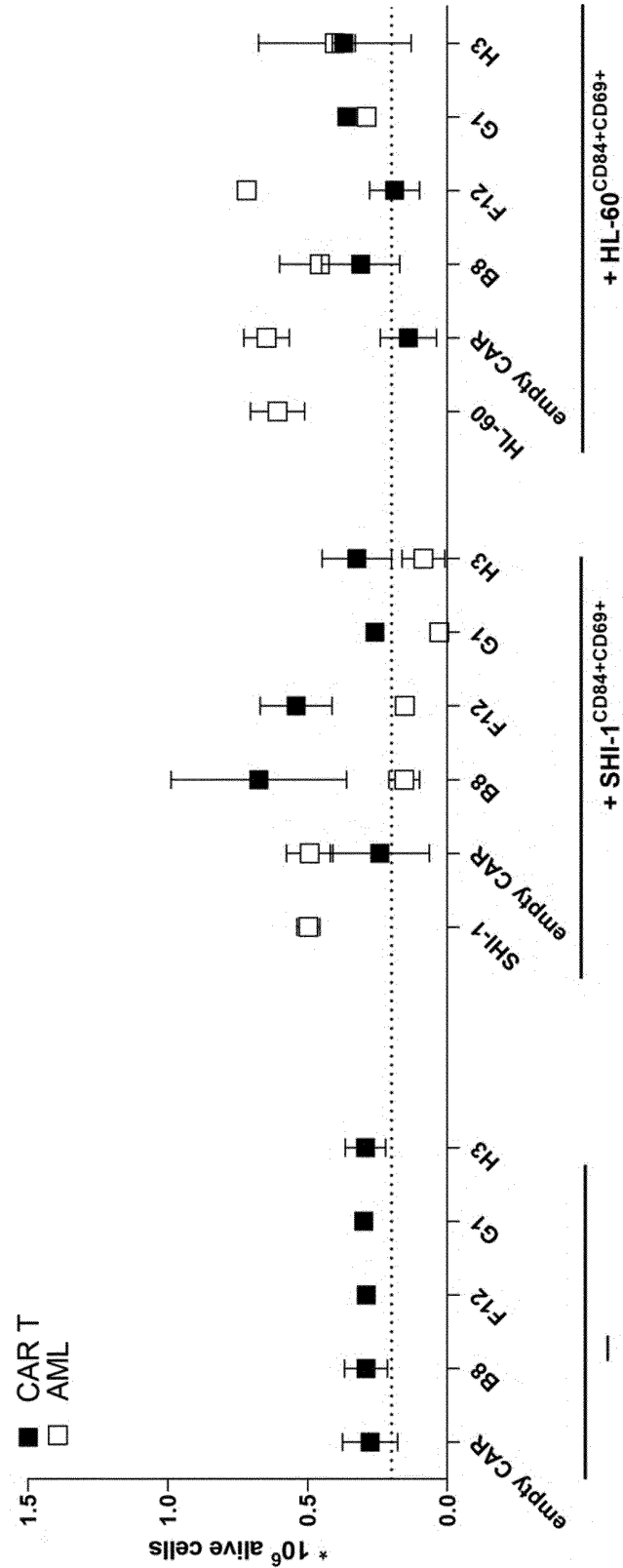


FIG. 25A

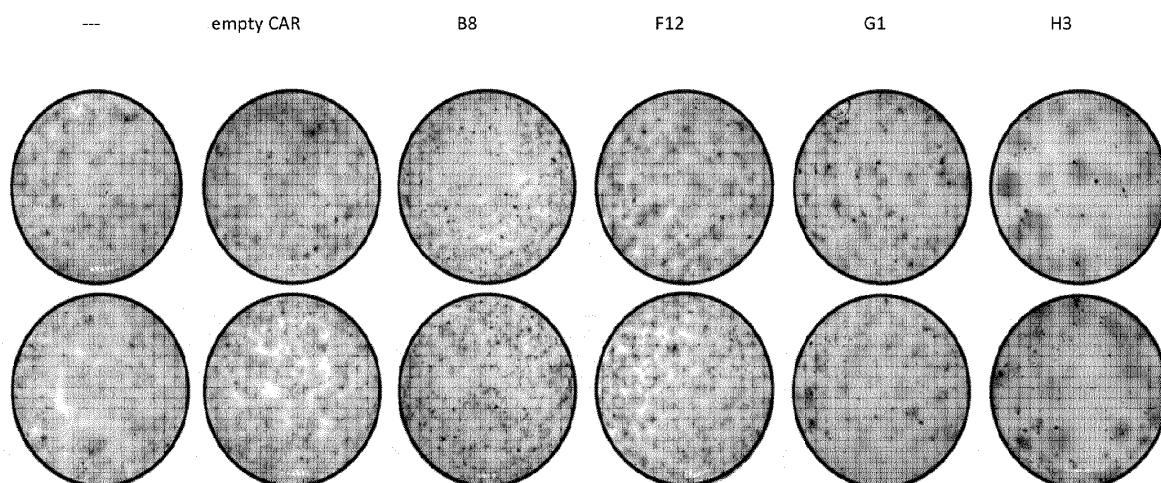


FIG. 25B

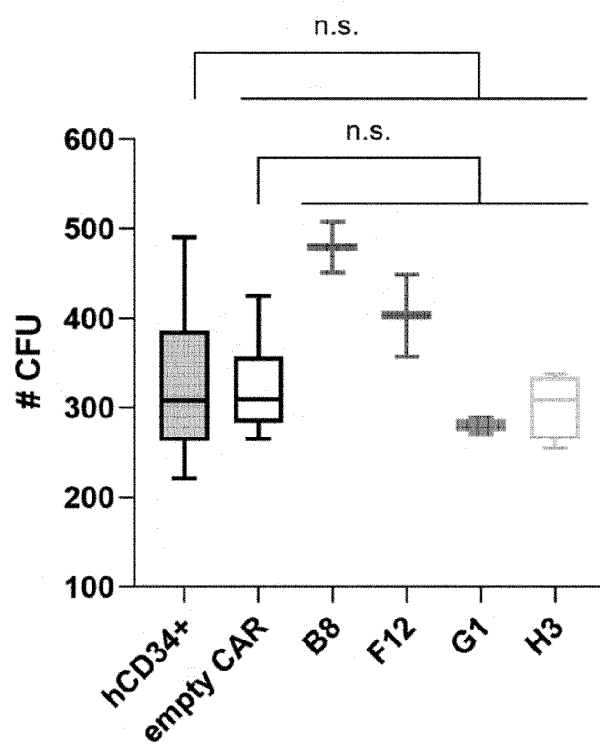


FIG. 26B

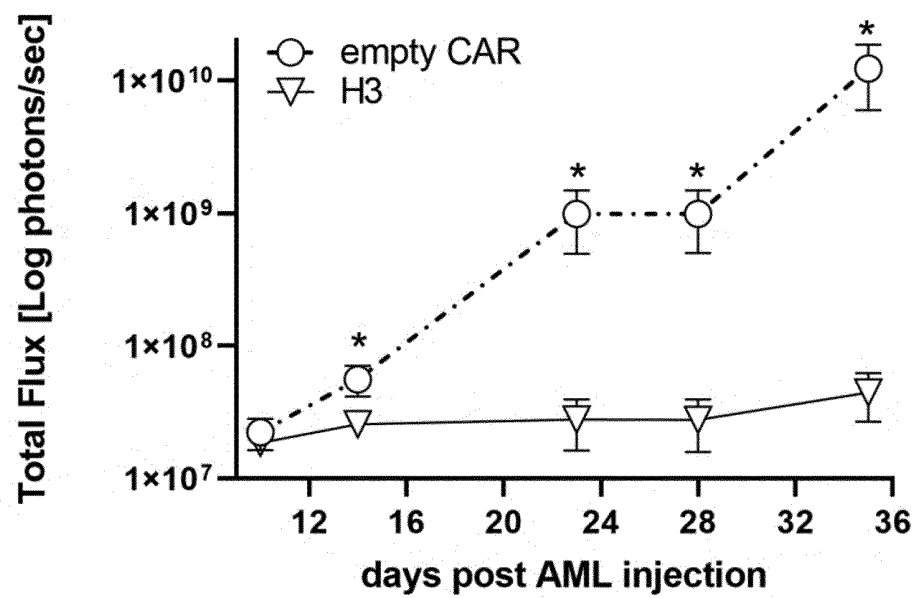
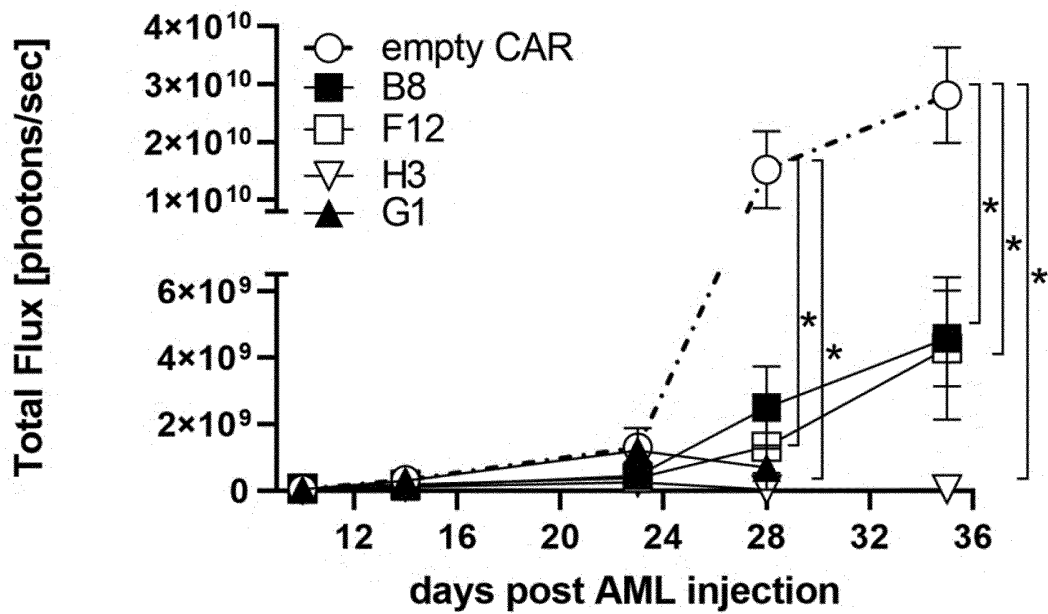


FIG. 26C



ACAGAGTACAGGTCCAAGTGGTTTGACGAGTACGCCCCAGCGTGAAGGGCAGAATCGCCATCAGACCTGACACCT
CCAAGAACCAGGTGTCCCTGCAGCTGAATAGCGTGACCCCCGAGGACACCGCGTGTACTACTGTGTGAGAGATAG
CTACAACGGCTACGATTTTGATGGCTTTGACATCTGGGGCCAGGGCACCCTGGTGACCGTGAGCTCCGGCGGAGGC
GGAAGCGGAGGAGGAGGAAGCGGCGGAGGCGGTAGCGGAGGAGGTGGAAGCCAGAGCGTGTGACCCAGCCTCC
TAGCGTGAGCGCCGCCCTGGACAGCAGGTGATCATCTCTGCAGCGGCTCCAGCTCCAACGTGGGCAATAACTACG
T GGCCTGGTACCAGCAGGTGCCCGCGCTGCTCCAGGCTGCTGATCTACGACAACTACAAGAGACCCTCCGGCATC
CCCGACAGGTTTTCCGGCAGCAAGTCCGGCACCTCCGCCACCCTGGGCATCACCGGACTGCAGAGCGGCGACGAGG
CCGACTACTACTGTGGCAGCTGGGATAGCTCCCTGAGCGCGGAGGTGTTTGGCGGCGGCACCAAGCTGACAGCCCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTTATGAGGCGCGTGACAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTCAGCAGGTCCGCCGACGCCCCCGCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCAAGGtgagtcgac (SEQ ID NO: 26)

SIP-scFv(14721-P1-G1)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTTTTTCTGCTGCTGGTGGCGCCCCCAGGTGGGTCTGAGCCAGG
TGCAGCTGCAGCAGTCCGGCCCTGGCCTGGTGAAGCCCTCCAGACACTGAGCCTGACATGCGCCATCTCCGGCGA
CAGCGTGTTACAGCACCACCGCCAGCTGGAATTGGATCAGACAGAGCCCCAGCAGAGGCCTGGAGTGGCTGGGCAAG
ACCGAGTACAGGAGCAAGTGGTTCGACGAGTACGCCCCAGCGTGAAGGGCAGGATCGCCATCAGACCTGACACAT
CCAGAAATCAGGTGAGCCTGCAGCTGAATAGCATGACACCCGAGGATACCGCCGTGTACTTCTGTGTGAGAGACAG
CTACAACGGCTACGACTTCGACGGCTTCGACATCTGGGGCCAGGGCACAACAGTGACAGTGAGCTCCGGCGGCGGC
GGCTCTGGAGGAGGAGGATCTGGCGGCGGCGGAAGCGGAGGAGGAGTTCTCAGAGCGTGGTGACACAGCCCCC
A GCGTGAGCGCGCTCCTGGACAAAAGGTGACCATCTCCTGCTCCGGCAGCAGCAGCAACATCGGCAATAACTACGT
GTCCTGGTACCAGCAGCTGCCTGGCACCGCCCCAAGCTGCTGATCTACGACAACAATAAGAGGCCAGCGGCATC
CCTGACAGATTCTCCGGCTCCAAGAGCGGCACCTCCGCCACCCTGGGCATCACAGGCCTGCAGACAGGCGACGAGG
CCGACTACTACTGTGGACATGGGATAGCTCCCTGTCCGCCGAGATGTTTGGCGGCGGCACCAAGGTGACCGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTTATGAGGCGCGTGACAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTCAGCAGGTCCGCCGACGCCCCCGCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCAAGGtgagtcgac (SEQ ID NO: 27)

SIP-scFv(14721-P1-C2)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTTTTTCTGCTGCTGGTGGCGCCCCCTAGGTGGGTGCTGAGCCAGG
TGCAGCTGCAGCAGAGCGGCCCTGGCCTGGTGAAGCCCAGCCAGACCCTGTCCCTGACATGCGCCATCAGCGGCGA
TAGCGTGTCCAGCAATAGCGCCTCCTGGAATTGGATCAGACAGAGCCCTAGCAGAGGCCTGGAGTGGCTGGGCAAG
GTGGAGTACAGGTCCAAGTGGTACGATGAGTACGCCCCCTCCGTGAAGAGCAGAATCGCCATCAGACCTGACACAT
CCAAGAACCAGGTGAGCCTGCACCTGATCTCCGTGACACCTGATGATACAGCCGTGTACTACTGCGCCAGGGACTC
CTACAACGGCCACGCCTTCGATGGCTTTGATGTGTGGGGCCAGGGCACAAGTGGTACCGTGCTCCAGCGGCGGCGGC
GGATCTGGAGGAGGAGGAAGCGGCGGCGGAGGCTGTGGAGGAGGTGGAAGCCAGTCCGTGCTGACCCAGCCCCC
T CCGTGAGCGCTGCTCCAGGACAGAAGGTGACAATCAGCTGCTCCGGCTCCAGCTCCAACATCGGCGATAATCTGGT
GAGCTGGTACCAGCAGCTGCCTGGCACAGCCCCTAAGCTGCTGATCTACGATAACAATAAGAGACCCTCCGGCATC

CCCGACAGGTTGACGCGCAGCAAGTCCGGCACCTCCGCCACACTGGACATCACAGGCCTGCAGACCGGCGACGAGG
CCGACTACTACTGCGAGAGCTGGGATAACAACCTGACCGCCGAGGTGTTGCGCACCGGCACAAAGGTGACAGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGCTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTTATGAGGCCCGTGACAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTCAGCAGGTCCGCCGACGCCCCCGCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCAAGGtgagtcgac (SEQ ID NO: 28)

SIP-scFv(14721-P1-F2)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTCTTCTGCTGCTGGTGGCCGCCCCCAGATGGGTGCTGTCCCAGG
TGCAGCTGCAGCAGTCCGGCCCCGGACTGGTGAAGCCTTCCAGACCCTGAGCCTGACCTGCGCCATCAGCGGCGA
CTCCGTGTTTAGCAACTCCGCCTCCTGGAAGTGGATCAGACAGTCCCTCCAGAGGCCTGGAGTGGCTGGGCAAG
ACAGAGTACAGGAGCAAGTGGTTTGACGAGTACGCCCCCTCCGTGAAGGGCAGGATCGCCATCAGACCCGATACCT
CCAAGAATCAGGTGAGCCTGCAGCTGAATAGCGTGACACCCGAGGACACCGCGTGTACTACTGTGTGAGAGACTC
CTACAATGGCTACGACTTCGACGGCTTTGACATCTGGGGCCAGGGCACCTGGTGACCGTGTCCAGCGGCGGAGGC
GGAAGCGGAGGAGGAGGAAGCGGCGGAGGAGGCTCCGGAGGAGGAGGTTCCAGAGCGTGCTGACCCAGCCCCCT
AGCGTGAGCGCCGCTCCTGGACAGAAGGTGACCATCAGTGCTCCGGCGGCTCCAGCAACATCGAGAAGAAGTACGT
GAGCTGGTACCAGCAGCTGCCTGGCACAGCCCCCTAAGCTGCTGATCTACGACACCAATAAGAGGCCTAGCGGCATC
CCCGACAGATTACGCGGCTCCAAGTCCGGCACAAGCGCCACACTGGGCATCACCGGCCTGCAGACCGGCGACGAGG
CCGATTACTACTGTGGCGCCTGGGATAATATCCTGAACTCCGAGATGTTCCGGCGGCGGCACAAAGCTGACAGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGCTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTTATGAGGCCCGTGACAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTCAGCAGGTCCGCCGACGCCCCCGCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCAAGGtgagtcgac (SEQ ID NO: 29)

SIP-scFv(14721-P1-H2)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTCTTTCTGCTGCTGGTGGCCGCCCCCAGATGGGTGCTGAGCCAGG
TGCAGCTGCAGCAGAGCGGCCCTGGCCTGGTGAAGCCTTCCAGACACTGAGCCTGACCTGTGCCATCAGCGGCGA
TAGCGTGTTTAGCAACAGCGCCAGCTGGAATTGGATCAGGCAGAGCCCTCCAGGGGCCTGGAGTGGCTGGGCAAG
ACCGAGTACAGGTCCAAGTGGTTCGATGAGTACGCCCCCTAGCGTGAAGGGCAGGATCGCCATCAGGCCTGACACCT
CCAAGAACCAGGTGTCCCTGCAGCTGAATCCGTGACACCTGAGGATACCGCCGTGTACTACTGCGTGAGGGATT
CTACAACGGCTACGACTTCGACGGCTTTGATATCTGGGGCCAGGGCACACTGGTGACAGTGTCTCCGGCGGCGGC
GGAAGCGGAGGAGGAGGATCTGGCGGCGGCGGTTCCGGAGGAGGAGGTTCTAGTCCGTGGTGACCCAGCCTCCC
A GCGTGAGCGCCGCTCCTGGACAGAAGGTGACCATCAGCTGTAGCGGCAGCTCCTCCAACATCGGCAACAACTACGT
GTCCTGGTACCAGCAGCTGCCCGCACCGCCCCAAAGCTGCTGATCTACGATAATAATAAGAGACCTTCCGGCATC
CCCGATAGATTTTCCGGCAGCAAGAGCGGCACAAGCGCCACCCTGGGCATCACAGGCCTGCAGACCGGCGACGAGG
CCGATTACTACTGCGGCACCTGGGATAGCAGCTGTCCGCCGAGGTGTTTGGCGGCGGCACCAAGCTGACCGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGCTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTTATGAGGCCCGTGACAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCCTGAGGAG

FIG 27 continued

GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTTCAGCAGGTCCGCCGACGCCCCGCCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCAAGGtgagtcgac (SEQ ID NO: 30)

SIP-scFv(14721-P1-H3)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTTTTCTGCTGCTGGTGGCCGCCCCAGGTGGGTTCTGTCCCAGG
TGCAGCTGCAGCAGAGCGGCCCGGACTGGTGAAGCCCAGCCAGACACTGAGCCTGACATGTGACATCTCCGGCGA
TTCCGTGTTCTCCAACACAGCCAGCTGGAATTGGATCAGGCAGAGCCCCAGCAGGGGCCTGGAGTGGCTGGGAAAG
ACAGAGTACAGATCCCAAGTGGCTGCACGAGTACGCCCTTCCGTGAGATCCAGGATCGCCATCAGACCCGACACCT
CCAAGAACCAGGTGTCCCTGCAGCTGTCTTCGTGACCCCGAGGACACCGCCGTGTACTACTGTGTGAGGGATT
CTACAATGGCTACGCCTTCGATGGCTTTGACACCTGGGGCCAGGGCACCCCTGGTGACCGTGAGCAGCGGCGGAGGC
GGAAGCGGAGGAGGAGGAAGCGGCGGAGGAGGCTCCGGAGGAGGAGGTAGCCAGAGCGTGGTGACCCAGCCCC
CA GCGTGTCCGCTGCTCCTGGACAGAAGGTGACCATCAGCTGTTCCGGCAGGAACTCCAACATCGCCAACAACCTTGT
GTCCTGGTACAGACAGCTGCCTGGCACCGCCCCAAGCTGCTGATCTACGACAATAATAAGAGGCCCTAGCGGCATC
CCCGATAGATTCTCCGGCTCCAAGAGCGGCACATCCGCCACCTGGCCATCACCGGCCTGCAGACCGGCGACGAGG
CCGATTACTACTGCGAGTCTGGGATAGCTCCCTGACCGCCGAGGTGTTTGGCACCGGCACCAAGGTGACCGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGCTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTATGAGGCCCTGCAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTTCAGCAGGTCCGCCGACGCCCCGCCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCAAGGtgagtcgac (SEQ ID NO: 31)

SIP-scFv(14722-P1-F12)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTTCTTCTGCTGCTGGTGGCCGCCCTAGGTGGGTGCTGAGCCAGG
TGCAGCTGCAGCAGTCCGGCCCTGGCCTGGTGAAGCCAGCCAGACACTGAGCCTGACCTGTGCCATCTCCGGCGA
CTCCGTGTCCAGCAACAGCGCCTCCTGGAAGTGGATCAGACAGTCCCCTAGCAGGGGCCTGGAGTGGCTGGGCAAG
GTGGAGTACAGATCCAAGTGGTACGATGAGTACGCCCCAGCGTGAAGAGCAGAATCGCCATCAGACCTGACACCA
GCAAGAACCAGGTGTCCCTGCACCTGATCAGCGTGACCCCTGATGACACAGCCGTGTACTACTGCGCCAGAGATAG
CTACAACGGCCACGCCTTTGATGGCTTTGATGTGTGGGGCCAGGGCACAATGGTGACCGTGAGCTCCGGCGGCGGC
GGATCTGGAGGAGGAGGAAGCGGCGGCGGCTTCTGGAGGAGGTGGAAGCCAGAGCGTGGTGACACAGCCTCCC
T CCGTGTCCGCCGCCCTGGACAAAAGGTGACCATCTCTGCAGCGGCAGCAGCAACATCGGCAATAACTACGT
GTCCTGGTACCAGCAGCTGCCTGGCACAGCCCCAAGCTGCTGATCTACGACAACAATAAGAGGCCAGCGGCATC
CCCGACAGGTTCTCCGGCTCCAAGTCCGGCACCTCCGCCACACTGGGCATCACAGGCCTGCAGACCGGCGACGAGG
CCGACTACTACTGTGGCACCTGGGATTCCAGCCTGAGCGCCGAGGTGTTTGGCGGCGGCACAAAGGTGACAGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGCTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTATGAGGCCCTGCAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTTCAGCAGGTCCGCCGACGCCCCGCCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCAAGGtgagtcgac (SEQ ID NO: 32)

FIG 27 continued

SIP-scFv(14722-P2-B8)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTTTTTCTGCTGCTGGTGGCCGCCCCAGATGGGTGCTGAGCCAGG
TGCAGCTGCAGCAGTCCGGCCCTGGCCTGGTGAAGCCTTCCCAGACACTGTCCCTGACCTGCGCCATCAGCGGCGA
CAGCGTGAGCAGCAATTCCGCCAGCTGGAAGTGGATCAGGCAGTCCCCAGCAGGGGCCTGGAGTGGCTGGGAAAG
GTGGAGTACAGGAGCAAGTGGTACGACGAGTACGCCCCAGCGTGAAGAGCAGAATCGCCATCAGGCCCCACACAT
CCAAGAATCAGGTGAGCCTGCACCTGATCAGCGTGACCCCGATGACACAGCCGTGTACTACTGCGCCAGAGACTC
CTACAACGGCCACGCCTTCGACGGCTTTGACGTGTGGGGCCAGGGCACAATGGTGACAGTGAGCTCCGGCGGCGGC
GGCTCTGGAGGAGGAGGATCTGGCGGCGGCGGAAGCGGAGGAGGAGGTTCTCAGAGCGTGCTGACCCAGCCCCCT
A GCCTGAGCGCCGCTCCTGGACAGAGAGTGACCATCAGCTGCTCCGGCACAACCTCCAATATCGCCAATAATTTCTG
GTCCTGGTACCAGCAGCTGTCCGGCTCCGCCCCCAAGCTGCTGATCAATGACAATAACAAGAGACCTCCGGCATC
CCCGATAGGTTCTCCGGCAGCAAGTCCGGCGCCTCCGCCACACTGGCCATCACCGGACTGCAGACAGAGGACGAGG
CCGACTACTACTGTGGCGTGTGGGACAACAGCCTGAATGCCGAGGTGTTTGGCGGCGGCACCAAGGTGACCGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGCTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTTATGAGGCCCGTGACAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTCAGCAGGTCCGCCGACGCCCCCGCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCCAAGGtgagtcgac (SEQ ID NO: 33)

SIP-scFv(14722-P2-B11)-hCD28hinge-hCD28TMD-4IBB-CD3zeta cDNA – 1 506bp
ggatccgccgccaccATGAAGCACCTGTGGTTTTTCTGCTGCTGGTGGCCGCCCCCTAGGTGGGTGCTGTCCCAGG
TGCAGCTGCAGCAGTCCGGCCCCGGACTGGTGAAGCCTTCCCAGACCCTGAGCCTGACATGTGCCATCTCCGGCGA
CAGCGTGTCTCCAACCTCCGCCAGCTGGAAGTGGATCAGGCAGTCCCCCTTCCAGAGGCCTGGAGTGGCTGGGCAAG
ACAGAGTACAGAAGCAAGTGGTACTACGAGTTTGCCCTAGCGTGAAGTCCAGAATCACCATCACCCCCGACACCA
GCAAGAATCAGTTTAGCCTGCAGCTGAATAGCGTGACCCCTGAGGATACAGCCGTGTACTACTGCGTGAGGGATAG
CTACAACGGCTACGACTTCGACGGCTTTGATATCTGGGGCCAGGGCACACTGGTGACCGTGTCCAGCGGCGGCGGC
GGATCTGGAGGAGGAGGAAGCGGCGGCGGAGGCTCTGGAGGAGGTGGAAGCCAGAGCGTGCTGACCCAGCCCCCT
A GCGTGAGCGCCGCTCCTGGACAGAAAGGTGACAATCAGCTGCTCCGGCTCCAGCAGCAACATCGGCAGCAATTACGT
GGCCTGGTACCAGCAGCTGCCTGGCACCGCCCCCAAGCTGCTGATCTACGACACAAACAAGAGGCCAGCGGCATC
CCTGACAGGTTACAGCGCAGCAAGAGCGGCACCAGCGCCACCCTGGGCATCACCGGACTGCAGACAGGCGACGAGG
CCGATTACTACTGTGGCACTGGGACTCCAGCCTGAGCGCCGAGGTGTTTGGCACAGGCACAAAGGTGACCGTGCT
GATCGAGGTGATGTACCCCCCCCCCTACCTGGACAATGAGAAGTCCAACGGCACAATCATCCACGTGAAGGGCAAG
CACCTGTGTCCAGCCCCCTGTTTCCGGCCCTAGCAAGCCCTTCTGGGTGCTGGTGGTGGTGGGCGGCGTGCTGG
CTTGTTACAGCCTGCTGGTGACAGTCGCCTTCATCATCTTTTGGGTGAAGAGGGGCAGGAAGAAGCTGCTGTACAT
CTTTAAGCAGCCCTTTATGAGGCCCGTGACAGACAACCCAGGAGGAGGACGGCTGTAGCTGCAGGTTTCTGAGGAG
GAGGAGGGCGGCTGTGAGCTGAGAGTGAAGTTCAGCAGGTCCGCCGACGCCCCCGCTACCAACAGGGACAGAATC
AGCTGTACAATGAGCTGAACCTGGGCAGAAAGAGAGGAGTACGACGTGCTGGATAAGAGGAGAGGCAGGGACCCTG
AGATGGGCGGCAAGCCTAGAAGAAAGAACCCCCAGGAGGGCCTGTACAATGAACTGCAGAAGGACAAGATGGCCG
AGGCCTACAGCGAGATCGGCATGAAGGGCGAGAGAAGGAGGGGCAAGGGCCACGATGGCCTGTACCAGGGCCTGT
CCA CAGCCACCAAGGACACATACGACGCCCTGCACATGCAGGCCCTGCCCCCAAGGtgagtcgac (SEQ ID NO: 34)

3. Expected protein sequence

SIP-scFv(14721-P1-A1)-hCD28hinge-hCD28TMD-4IBB-CD3zeta – 494AAs MW=53.75kDa

FIG 27 continued

MKHLWFFLLLVAAAPRWVLSQVQLQQSGPGLVQPSRTLSLTCAISGDSISSNTASWNWIRQSPSRGLEWVGKTEYRS
GWFFEYAPSVGGRVNISPDTSKNQFSLQLNSVTPEDTAVYFCARDSYNDYDNDGFDIWGQGTLTVSSGGGGSGGG
GSGGGGSGGGGSQSVLTQPPSVSAAPGQKVTISCSGSSSNIGSNYVAWYQQLPGTAPKLLIYDNRKPSGIPDRFS
GSKSGTSATLGITGLQTGDEADYYCGTWSSLSAEVFGTGKTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 35)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14721-P1-C1)-hCD28hinge-hCD28TMD-4IBB-CD3zeta – 494AAs MW=53.93kDa

MKHLWFFLLLVAAAPRWVLSQVQLQQSGPGLVKPSQTLTCAISGDSVSSNSASWNWIRQSPSRGLEWLGKTEYRS
KWYEFAPSVKSRITITPDTSKNQFSLQLNSVTPEDTAVYYCVRDSYNGYDFDGFDIWGQGTLTVSSGGGGSGGG
GSGGGGSGGGGSQSVLTQPPSVSAAPGQKVTISCSGSSSNIGSNYVAWYQQLPGTAPKLLIYDNRKPSGIPDRFS
GSKSGTSATLGITGLQTGDEADYYCGTWSSLSAEVFGTGKTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 36)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14721-P1-F1)-hCD28hinge-hCD28TMD-4IBB-CD3zeta – 494AAs MW=53.87kDa

MKHLWFFLLLVAAAPRWVLSQVQLQQSGPGLVKPSQTLTCAISGDSVFSNSASWNWIRQSPSRGLEWLGKTEYRS
KWFEYAPSVKGRIARPDTSKNQVSLQLNSVTPEDTAVYYCVRDSYNGYDFDGFDIWGQGTLTVSSGGGGSGGG
GSGGGGSGGGGSQSVLTQPPSVSAAPGQVVIISCSGSSSNVGNVVAWYQQVPGAAPRLIYDNYKRPSGIPDRFS
GSKSGTSATLGITGLQSGDEADYYCGSWSSLSAEVFGGKTALIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 37)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14721-P1-G1)-hCD28hinge-hCD28TMD-4IBB-CD3zeta – 494AAs MW=53.95kDa

MKHLWFFLLLVAAAPRWVLSQVQLQQSGPGLVKPSQTLTCAISGDSVFSTASWNWIRQSPSRGLEWLGKTEYRS
KWFEYAPSVKGRIARPDTSRNQVSLQLNSMTPEdTAVYFCVRDSYNGYDFDGFDIWGQGTTVTVSSGGGGSGGG
GSGGGGSGGGGSQSVVTQPPSVSAAPGQKVTISCSGSSSNIGNNYVSWYQQLPGTAPKLLIYDNNKRPSGIPDRFS
GSKSGTSATLGITGLQTGDEADYYCGTWSSLSAEMFGGKTIVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 38)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14721-P1-C2)-hCD28hinge-hCD28TMD-4IBB-CD3zeta – 494AAs MW=53.94kDa

MKHLWFFLLLVAAAPRWVLSQVQLQQSGPGLVKPSQTLTCAISGDSVSSNSASWNWIRQSPSRGLEWLGKVEYRS
KWYDEYAPSVKSRIARPDTSKNQVSLHLISVTPDDTAVYYCARDSYNGHAFDGFVDVWGQGTLTVSSGGGGSGGG
GSGGGGSGGGGSQSVLTQPPSVSAAPGQKVTISCSGSSSNIGDNLVSWYQQLPGTAPKLLIYDNNKRPSGIPDRFS

FIG 27 continued

GSKSGTSATLDITGLQTGDEADYYCESWDNNLTAEVFGTGKVTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 39)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14721-P1-F2)-hCD28hinge-hCD28TMD-4IBB-CD3zeta — 494AAs MW=54.06kDa
MKHLWFFLLVAAPRWVLSQVQLQQSGPGLVKPSQTLSTCAISGDSVFSNSASWNWIRQSPSRGLEWLGKTEYRS
KWFDEYAPSVKGRIAIRPDTSKNQVSLQLNSVTPEDTAVYYCVRDSYNGYDFDGFDIWGQGLTVTVSSGGGGSGGG
GSGGGGSGGGGSQSVLTQPPSVSAAPGQKVTISCSGSSNIEKNYVSWYQQLPGTAPKLLIYDNNKRPSGIPDRFS
GSKSGTSATLGITGLQTGDEADYYCGAWDNLNSEMFGGGTKLTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 40)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14721-P1-H2)-hCD28hinge-hCD28TMD-4IBB-CD3zeta — 494AAs MW=53.90kDa
MKHLWFFLLVAAPRWVLSQVQLQQSGPGLVKPSQTLSTCAISGDSVFSNSASWNWIRQSPSRGLEWLGKTEYRS
KWFDEYAPSVKGRIAIRPDTSKNQVSLQLNSVTPEDTAVYYCVRDSYNGYDFDGFDIWGQGLTVTVSSGGGGSGGG
GSGGGGSGGGGSQSVVTQPPSVSAAPGQKVTISCSGSSNIGNNNYVSWYQQLPGTAPKLLIYDNNKRPSGIPDRFS
GSKSGTSATLGITGLQTGDEADYYCGTWSSLSAEVFGGGTKLTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 41)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14721-P1-H3)-hCD28hinge-hCD28TMD-4IBB-CD3zeta — 494AAs MW=54.22kDa
MKHLWFFLLVAAPRWVLSQVQLQQSGPGLVKPSQTLSTCDISGDSVFSNTASWNWIRQSPSRGLEWLGKTEYRS
QWLHEYAPSVRSRIAIRPDTSKNQVSLQLSFVTPEDTAVYYCVRDSYNGYAFDGFDTWGQGLTVTVSSGGGGSGGG
GSGGGGSGGGGSQSVVTQPPSVSAAPGQKVTISCSGRNSNIANNFVSWYRQLPGTAPKLLIYDNNKRPSGIPDRFS
GSKSGTSATLAITGLQTGDEADYYCESWDSSLTAEVFGTGKVTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 42)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14722-P1-F12)-hCD28hinge-hCD28TMD-4IBB-CD3zeta — 494AAs MW=53.77kDa
MKHLWFFLLVAAPRWVLSQVQLQQSGPGLVKPSQTLSTCAISGDSVSSNSASWNWIRQSPSRGLEWLGKVEYRS
KWYDEYAPSVKSRIAIRPDTSKNQVSLHLISVTPDDTAVYYCARDYNGHAFDGFVDVWGQGTMTVTVSSGGGGSGGG
GSGGGGSGGGGSQSVVTQPPSVSAAPGQKVTISCSGSSNIGNNNYVSWYQQLPGTAPKLLIYDNNKRPSGIPDRFS
GSKSGTSATLGITGLQTGDEADYYCGTWSSLSAEVFGGGTKVTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 43)

FIG 27 continued

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14722-P2-B8)-hCD28hinge-hCD28TMD-4IBB-CD3zeta — 494AAs MW=53.89kDa
MKHLWFFLLLVAAPRWVLSQVQLQQSGPGLVKPSQTLSTCAISGDSVSSNSASWNWIRQSPSRGLEWLGKVEYRS
KWYDEYAPSVKSRIAIRPDTSKNQVSLHLISVTPDDTAVYYCARDSSYNGHAFDGFDFVWGQGTMTVSSGGGGSGGG
GSGGGGSGGGGSQSVLTQPPSLSAAPGQRTVITSCGTTSTNIANNFVSWYQQLSGSAPKLLINDNNKRPSGIPDRFS
GSKSGASATLAITGLQTEADYYCGVWDNSLNAEVFGGGTKVTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 44)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]

> SIP-scFv(14722-P2-B11)-hCD28hinge-hCD28TMD-4IBB-CD3zeta — 494AAs MW=53.93kDa
MKHLWFFLLLVAAPRWVLSQVQLQQSGPGLVKPSQTLSTCAISGDSVSSNSASWNWIRQSPSRGLEWLGKTEYRS
KWYEFAPSVKSRIITPDTSKNQFSLQLNSVTPEDTAVYYCVRDSYNGYDFDGFDFIWGQGTMTVSSGGGGSGGG
GSGGGGSGGGGSQSVLTQPPSVSAAPGQKVTISCSGSSNIGSNYVAWYQQLPGTAPKLLIYDTNKRPSGIPDRFS
GSKSGTSATLGITGLQTGDEADYYCGTWDSSLSAEVFGTGKVTVLIEVMYPPPYLDNEKSNGTIIHVKGKHLCP
PLFPGPSKPFWVLVVVGGVLACYSLLVTVAFIIFWVKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEEEEGGC
ELRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLYNELQDKMAEAYSEI
GMKGERRRGKGGHDGLYQGLSTATKDTYDALHMQALPPR (SEQ ID NO: 36)

Features : SIP : [1 : 19] scFv : [20 : 274] hCD28hinge-hCD28TMD-4IBB-CD3zeta : [275 : 494]