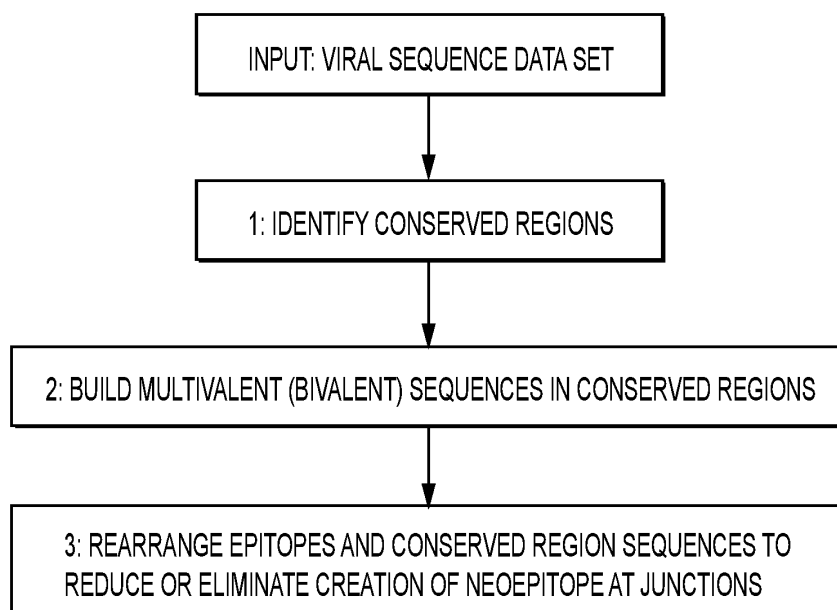
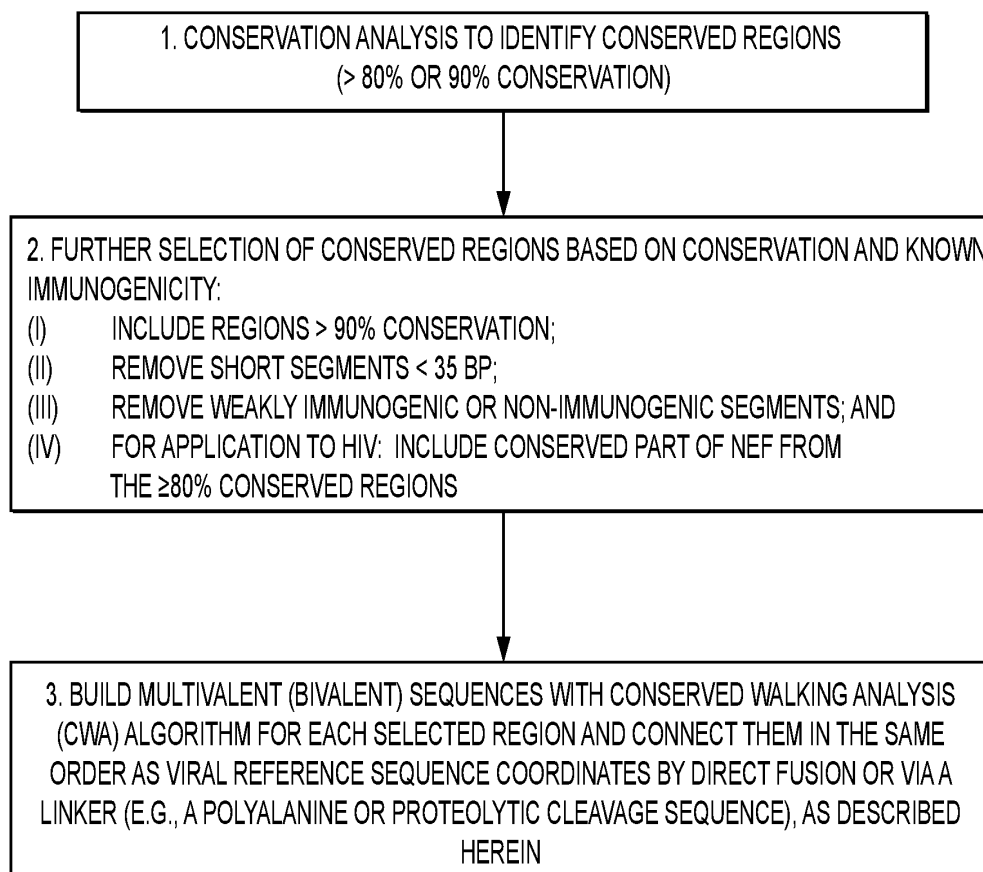
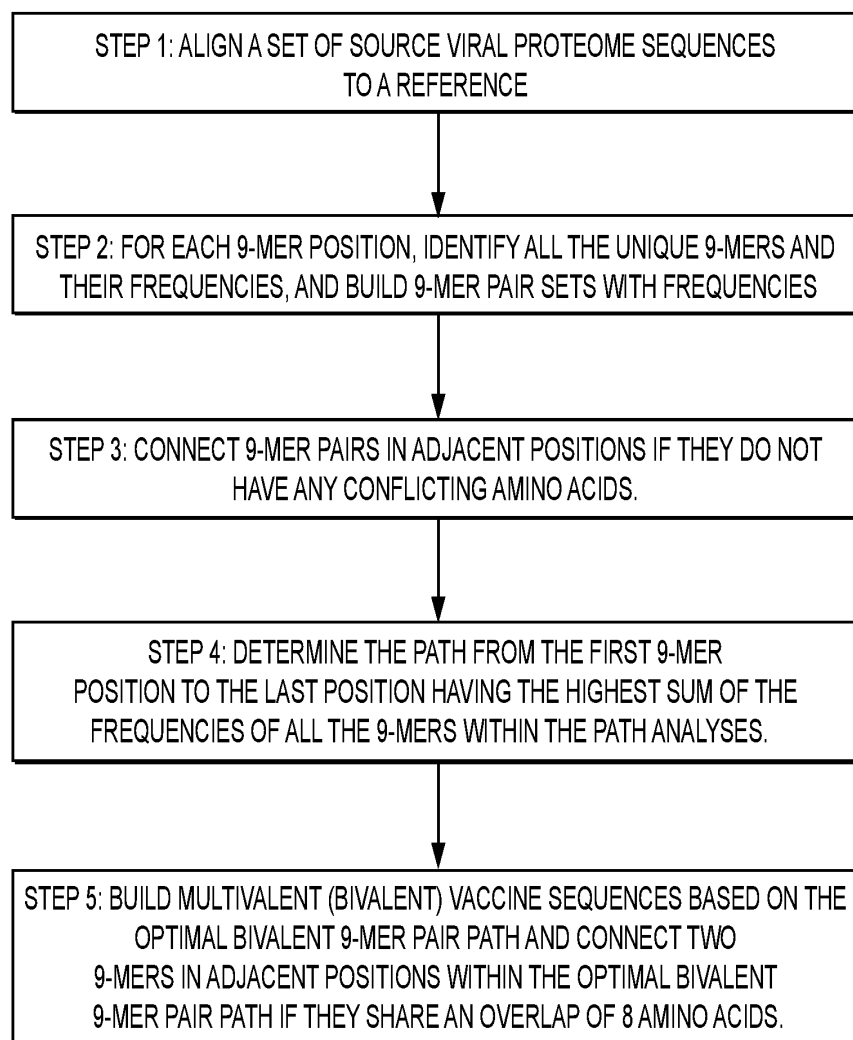
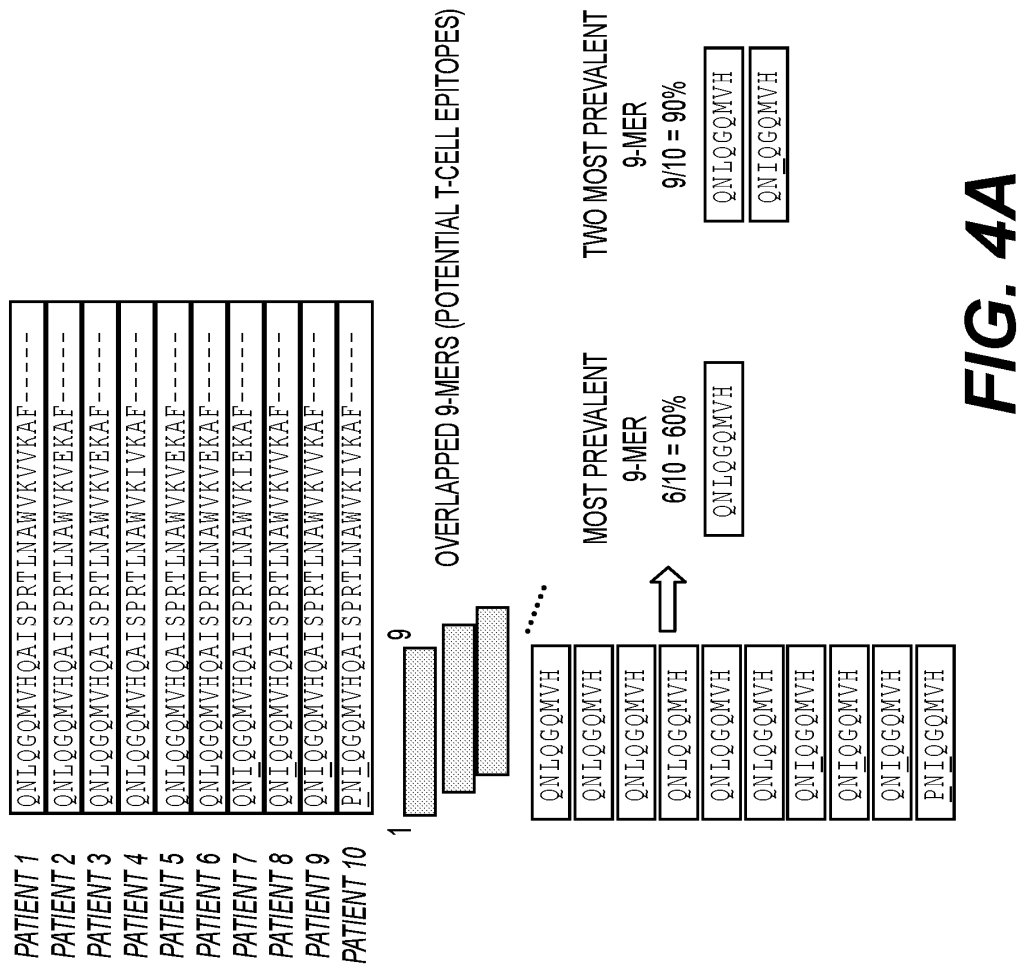


**FIG. 1**

**FIG. 2**

**FIG. 3**



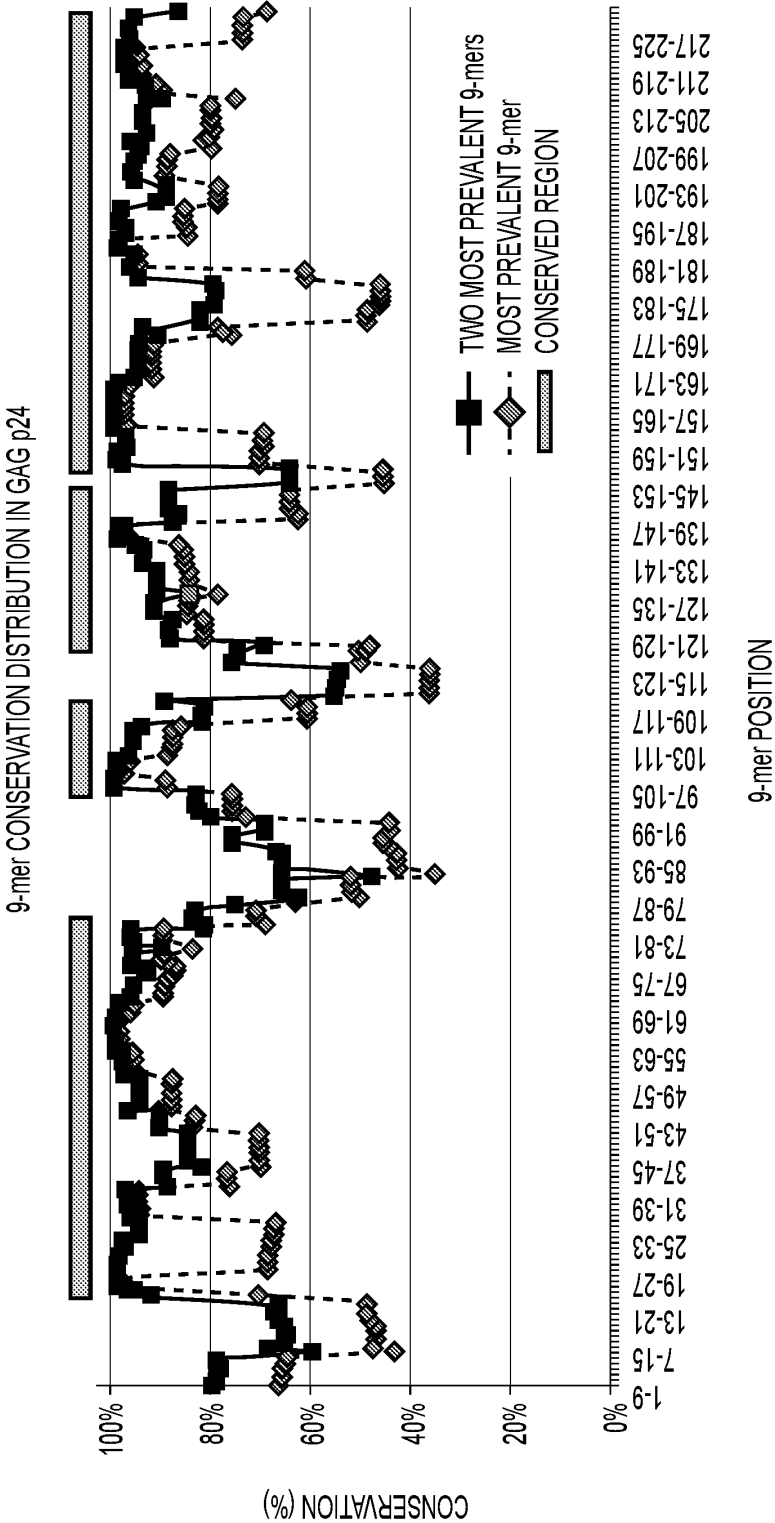


FIG. 4B

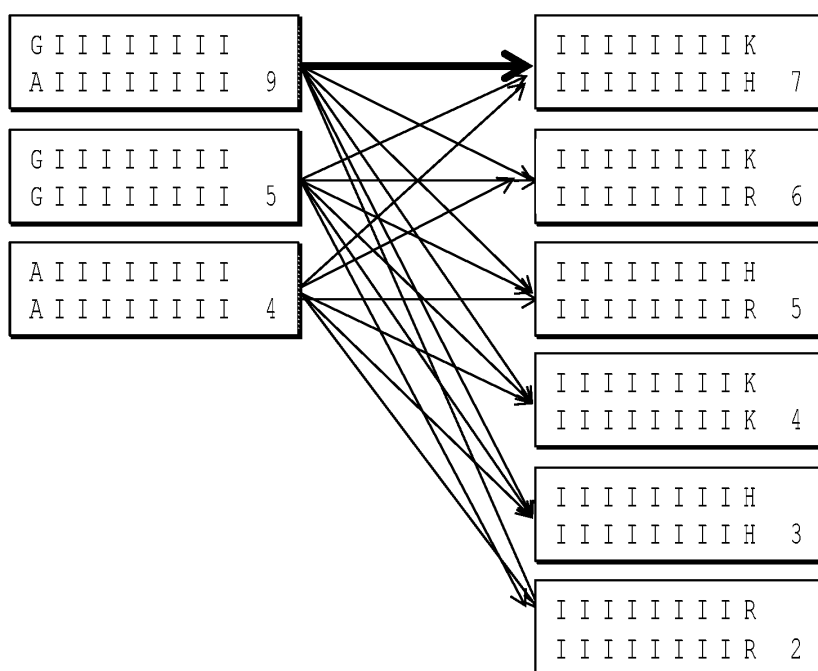
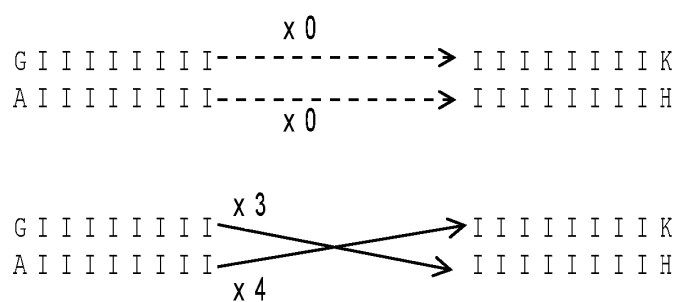
INPUT 9 NATURAL SEQUENCES:

UNIQUE 9-mers:

A I I I I I I I I K x 4
 G I I I I I I I I H x 3
 G I I I I I I I I R x 2

G I I I I I I I I I x 5
 A I I I I I I I I I x 4

I I I I I I I I I K x 4
 I I I I I I I I I H x 3

FIG. 5A**FIG. 5B****FIG. 5C**

HIV PEPTIDE	HLA ALLELE	HUMAN PROTEIN 9-MER	HUMAN PROTEIN
HPPQAGPVA	B07:02	VPLQAGPVQ	sp P15822 ZEP1
		MPGQAGPVG	sp P35247 SFTPD
		QYRQAGPVI	sp Q8NCI6 GLBL3

FIG. 6

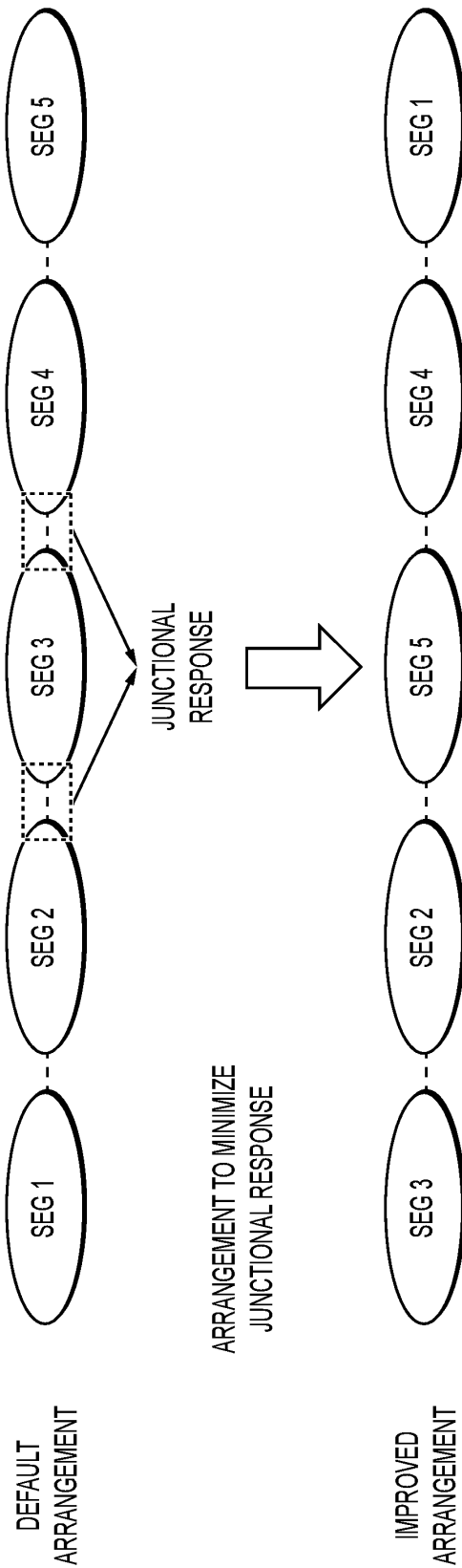


FIG. 7

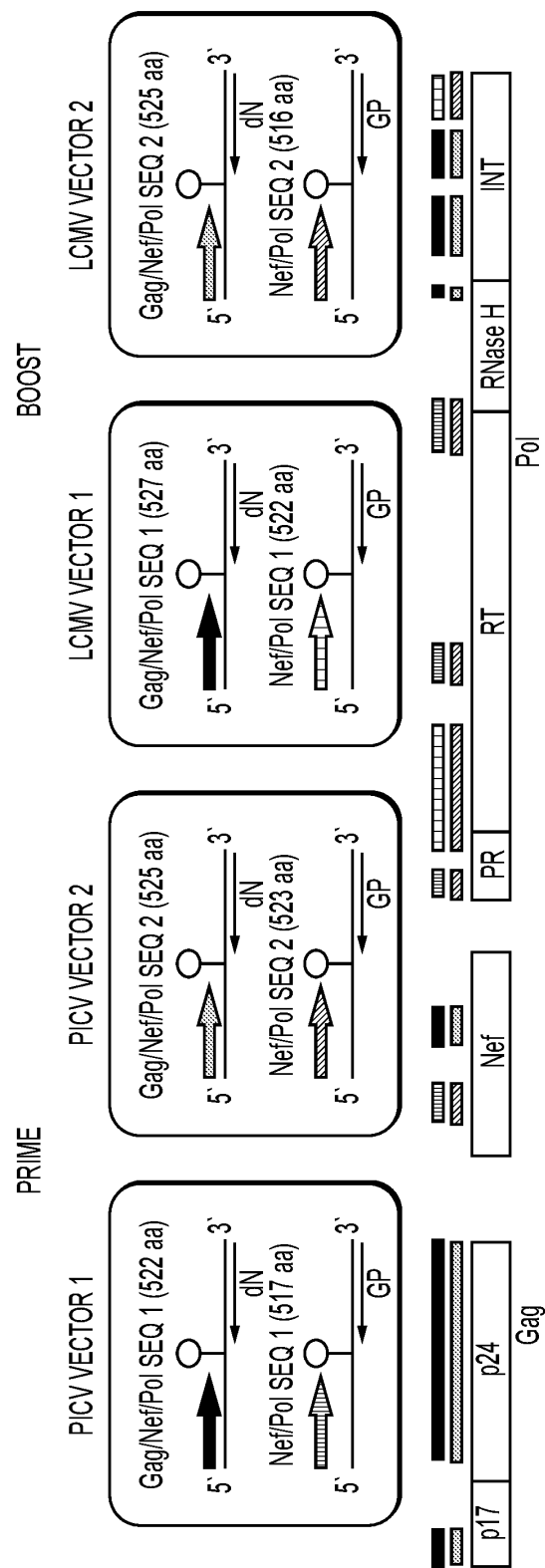
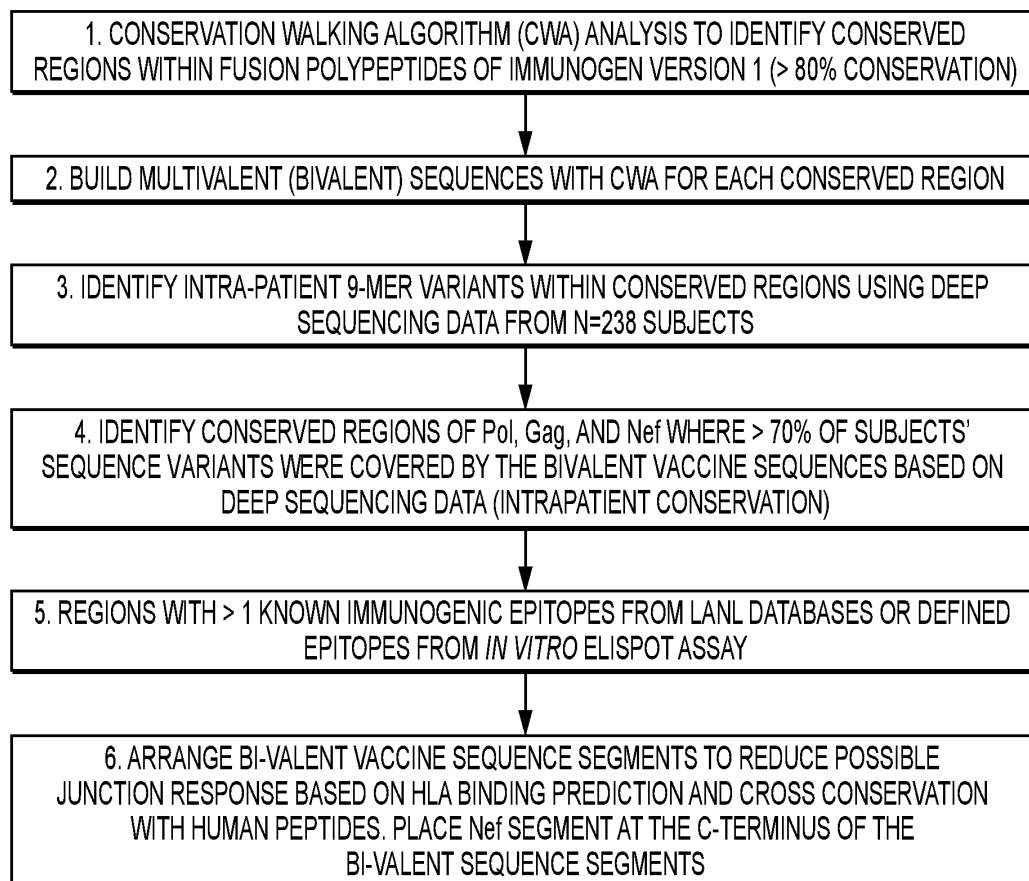


FIG. 8

**FIG. 9**

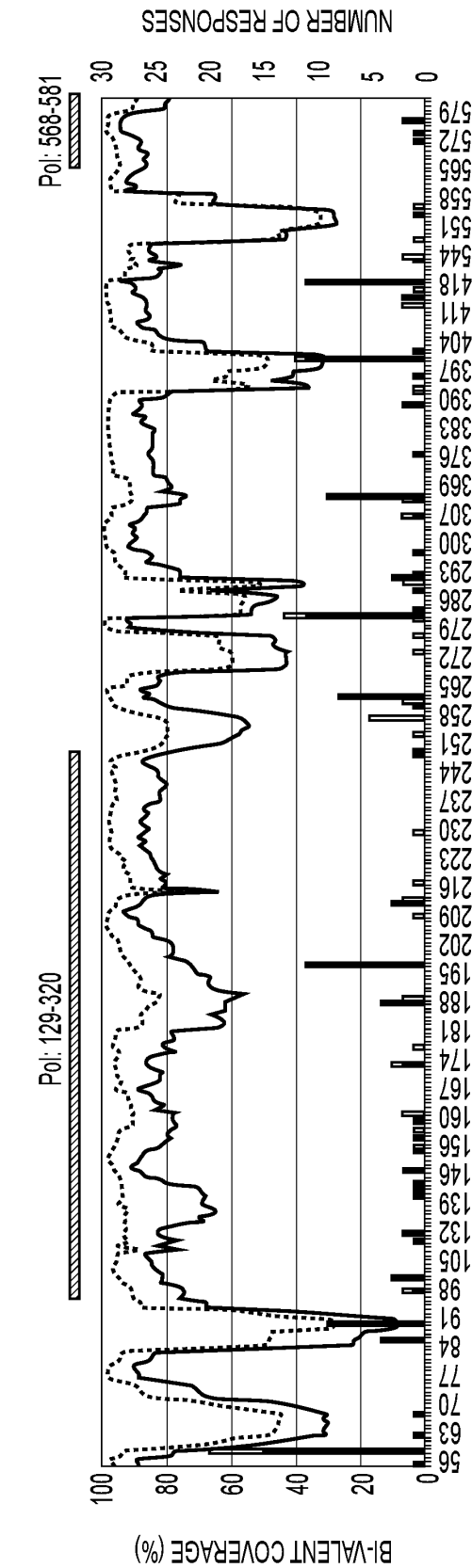


FIG. 10A

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Pol: 582-606; 683-708; 747-827; 840-920; 932-1003

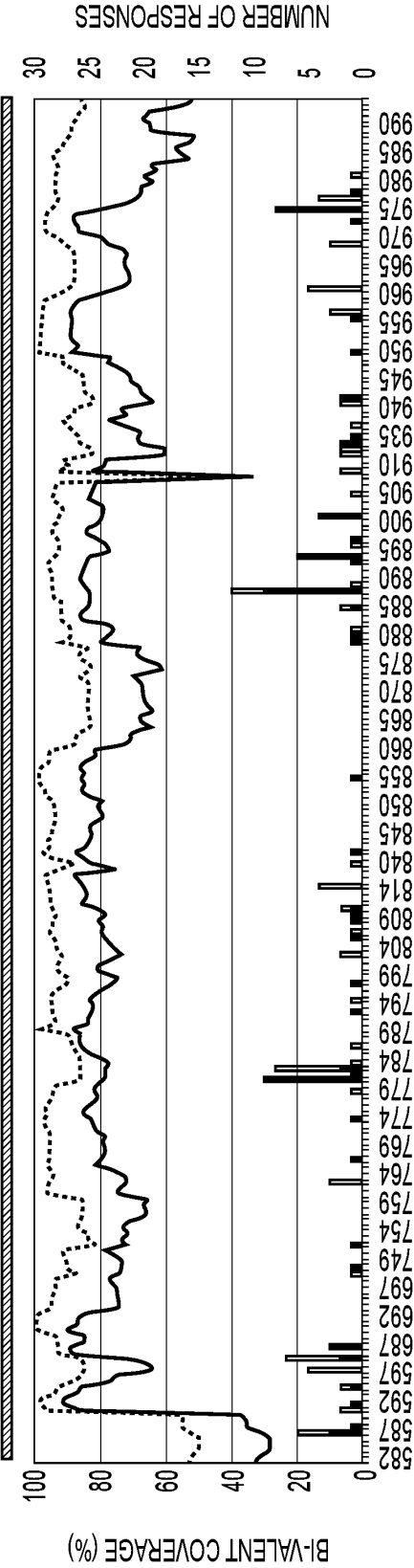
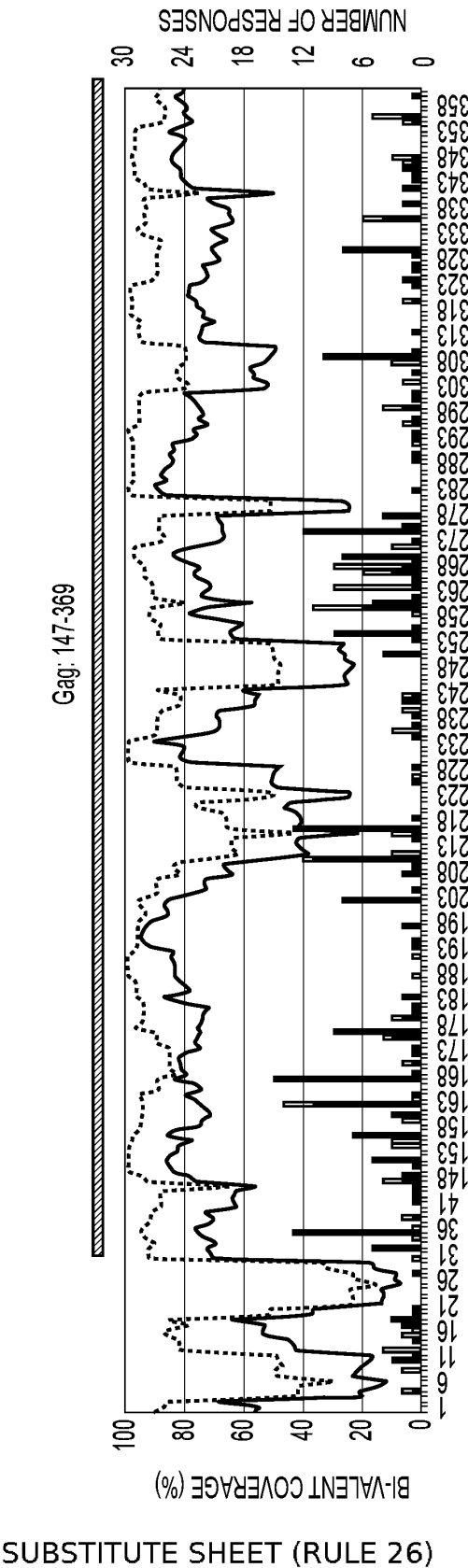


FIG. 10B



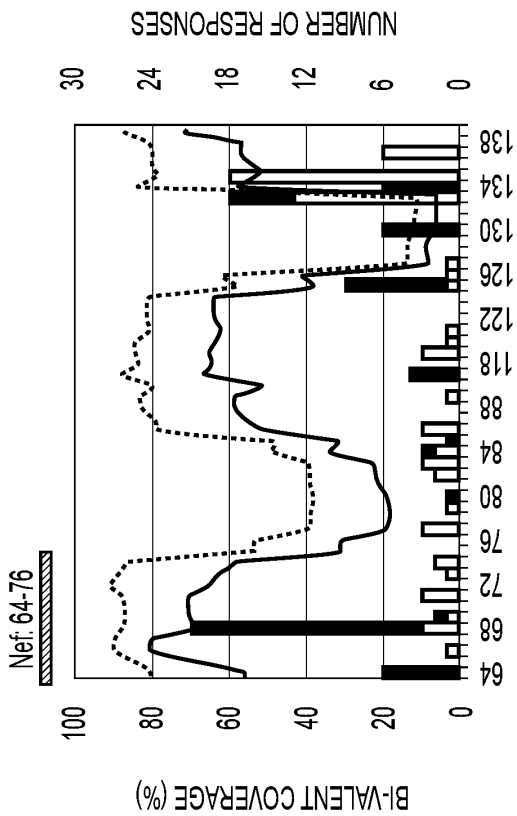


FIG. 10D

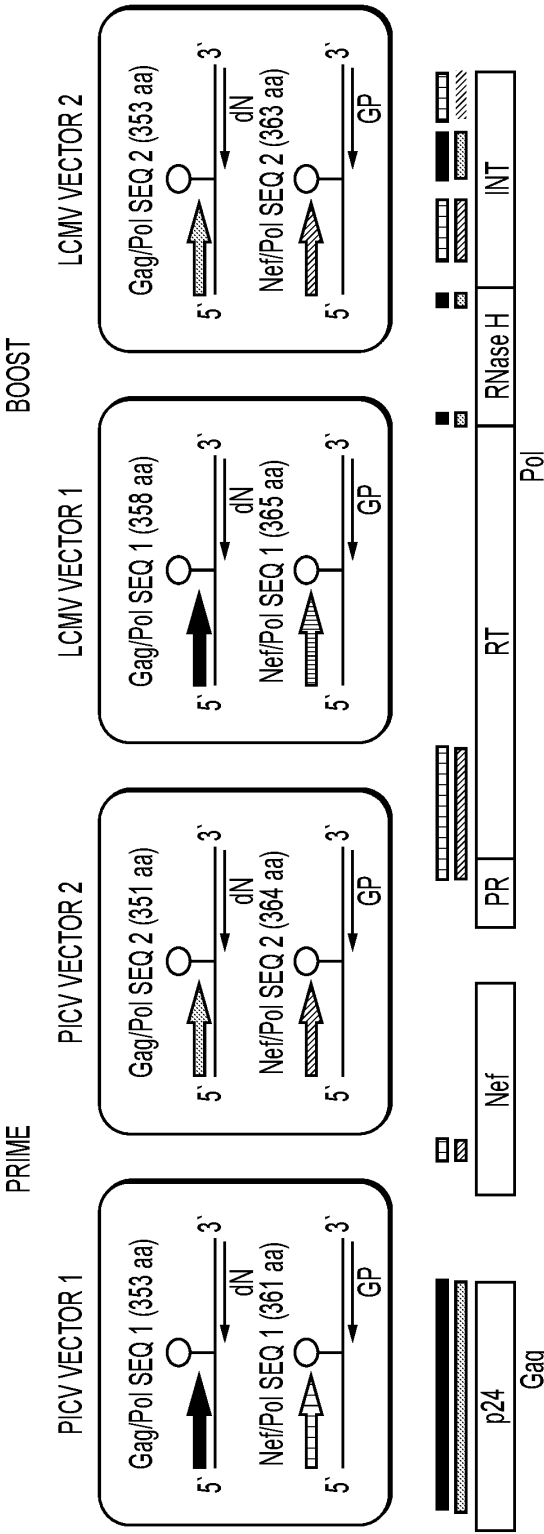


FIG. 11

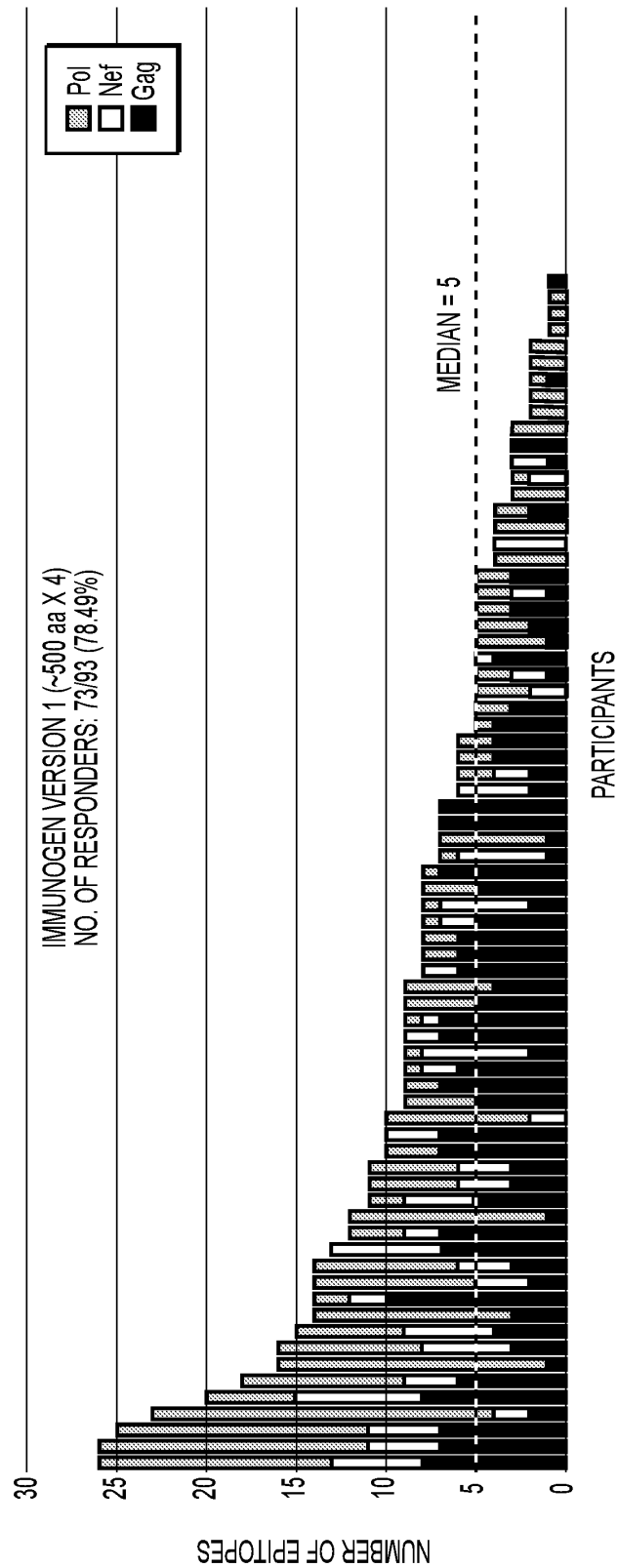


FIG. 12A

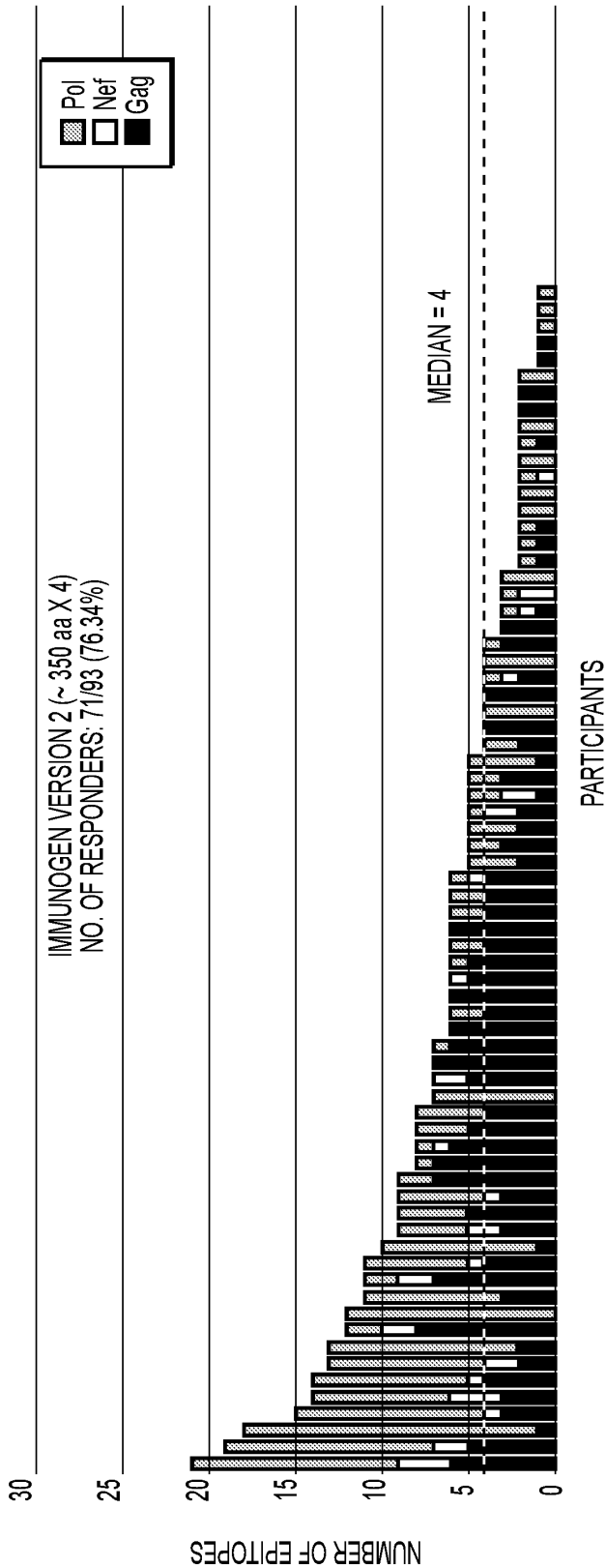
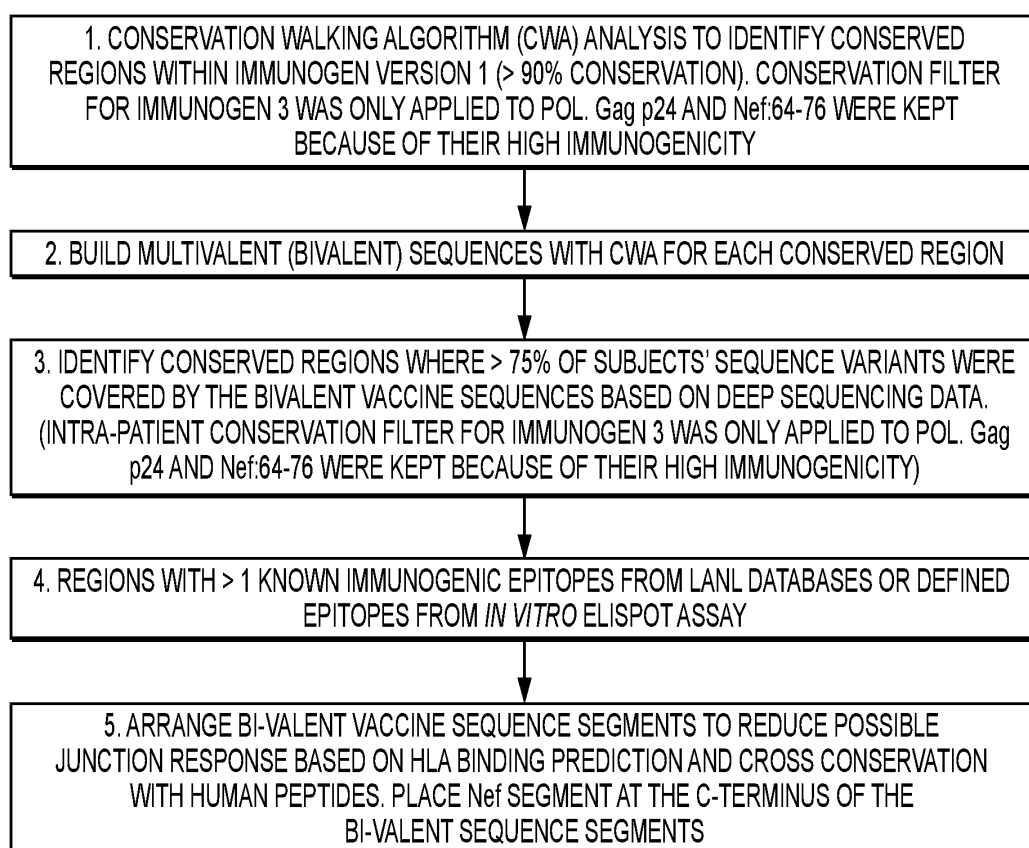


FIG. 12B

**FIG. 13**

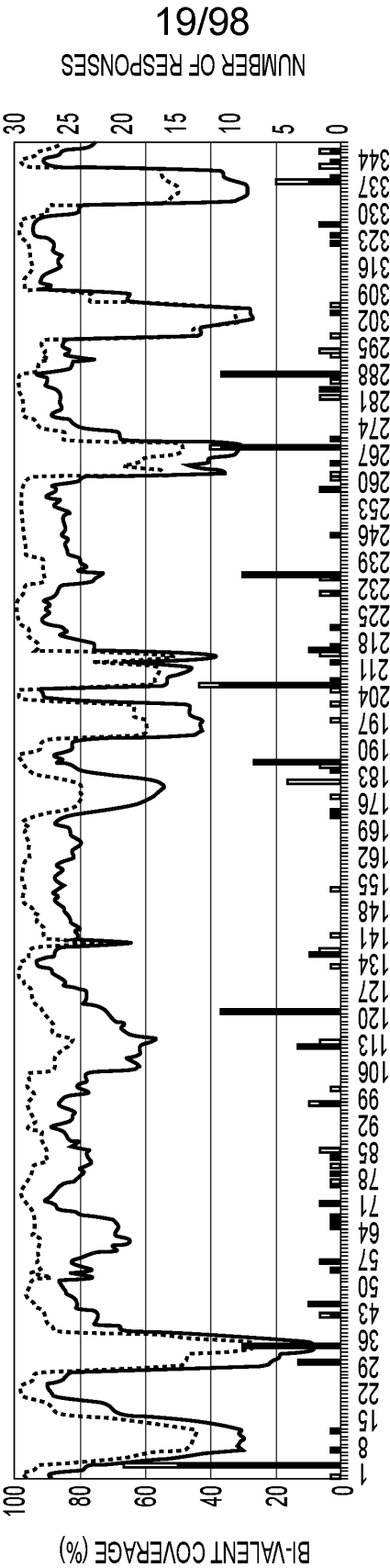


FIG. 14A

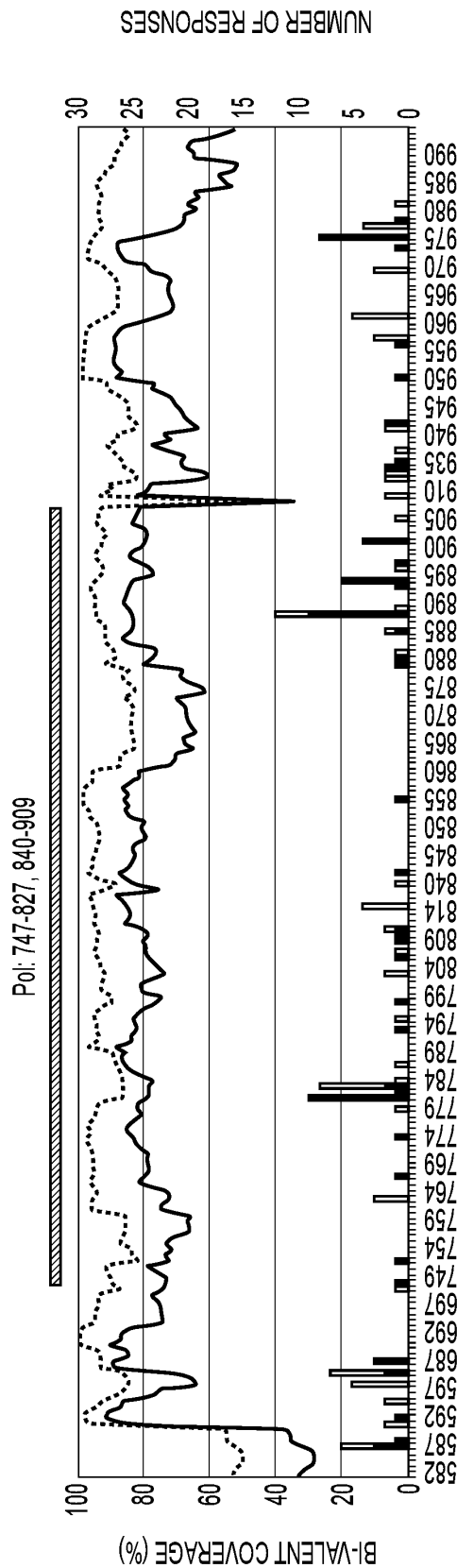


FIG. 14B

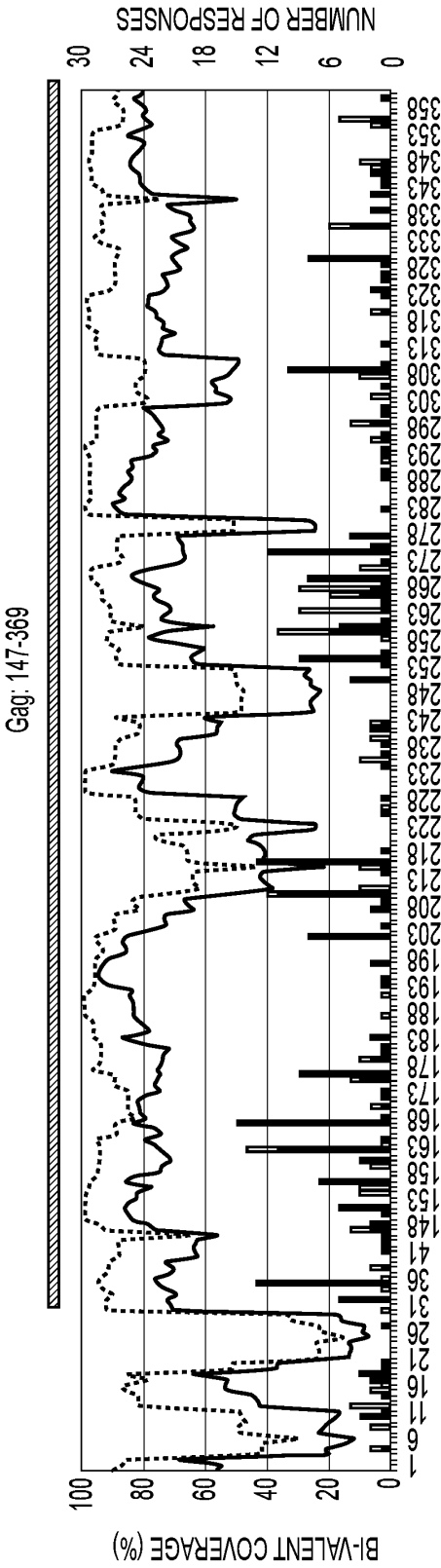


FIG. 14C

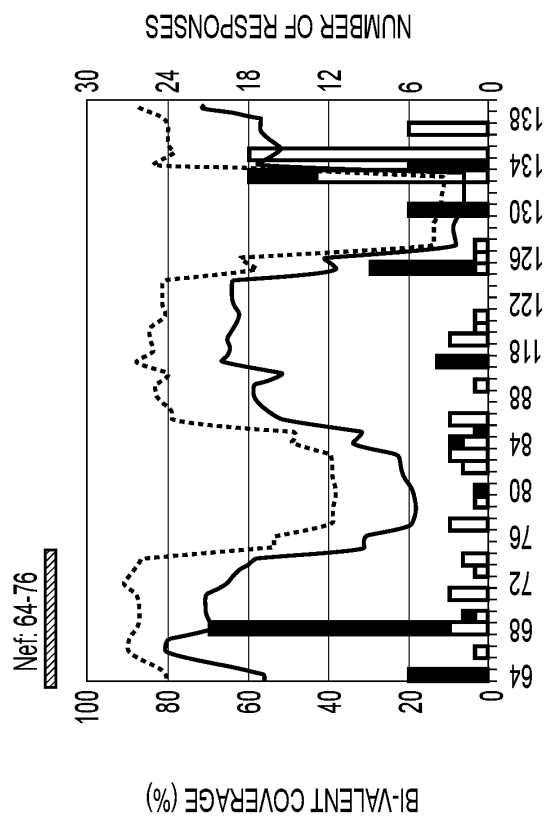


FIG. 14D

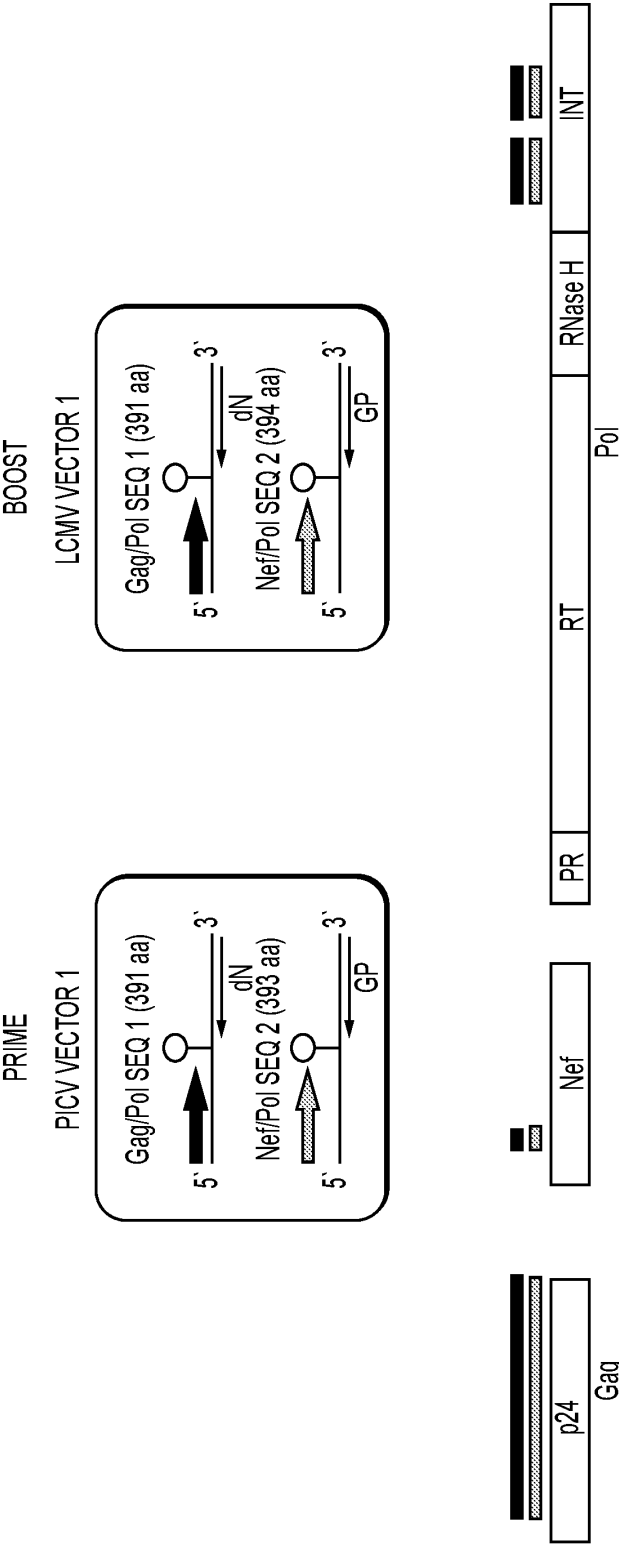


FIG. 15

MGARASVLSGGELDRWEKIRLRPGGKKKYKILKHIVWASRELERFAVNPGLLETSEGCRQILGQLQPSLQGTGSEELRSLYNTVAT
MAARASVLSGGELDRWEKIRLRPGGKKKYRILKHIVWASRELERFAVNPGLLET
MAARASVLSGGELDRWEKIRLRPGGKKKYRILKHIVWASRELERFAVNPGLLET

LYCVHQRIEIKDTKEALDKIEEEQNKSKKKAQQAAADTGHSNQVSQNYPIVQNIQGQMVHQAI
ISPRTLNAWVKVVEEKAFSPEV
ISPRTLNAWVKVVEEKAFSPEV
ISPRTLNAWVKVVEEKAFSPEV

I PMFSALSEGATPODLNTMLNTVGGHQAAQMMLKETINEEAAEWDVRVHPVHAGPIAPGQMPREPRGSDIAGTTSTLQEQIGWMTN
I PMFSALSEGATPODLNTMLNTVGGHQAAQMMLKETINEEAAEWDVRVHPVHAGPIAPGQMPREPRGSDIAGTTSTLQEQIGWMTN
I PMFTALSEGATPHDLNTMLNTIGGHQAAQMMLKDTINEEAAEWDVRVHPVHAGPVAPGQMRDPRGSDIAGSTSTLQEQIAWMTN

NPPIPVGEIYKRWIIIGLNKIVRMYSPTSILDIRQGPKEPFRDYVDRFYKTLRAEQASQEVKNWMTETLLVQANPDCCKTILKA
NPPIPVGEIYKRWIIIGLNKIVRMYSPTSILDIRQGPKEPFRDYVDRFYKTLRAEQASQEVKNWMTETLLVQANPDCCKTILKA
NPPIPVGDIYKRWIIIMGLNKIVRMYSPTSILDIKQGPKEPFRDYVDRFYRTLRAEQASQDVKNWMTETLLVQNSNPDCCKTILKA

LGPAATLEEMMTACQGVGGPGHKARVLAEAMSQVTNSATIMMQRGNFRNQRKIVKCFNCGKEGHTARNCRAPRKKGCWKCGKEG
LGPAATLEEMMTACQGVGGPGHKARVLAEAMSQ
LGPGATLEEMMSACQGVGGPSHKARVLAEAMCQ

HQMKDCTERQANFLGKIWPSYKGRPGNFLQSRPEPTAPPEESFRSGVETTPPQKQEPIDKELYPLTSLRSLFGNDPSSQ

FIG. 16

FFREDLAFLOQKAREFSSEQTRANSPTRRELQVWGRDNNSPSEAGADRQGTVSFNFPOVTLWQRPPLVTIKIGGQLKEA
FPQITLWQRPPLVTIKIGGQLKEA
LPQITLWQRPPIVTIKIGGQIKEA

LLDTGADDTCLEEMSLPGRWKPKMIGGIGGFIVKVRQYDQILLIEICGHKAI GTVLVGPTPVNI IGRNLLTQIGCTLNFP
LLDTGADDTVLEEMNLPGRWKPKMIGGIGGFIVKVRQYDQ GTVLVGPTPVNI IGRNLLTQIGCTLNFP
LLDTGADDTVLEDNMLPGKWKPKMIGGIGGFIVKVKYDQ GTVLIGPTPVNI IGRNLLTQIGCTLNFP

ISPIETVPVKLPGMDGPKVKQWPLTEEKIKALVEICTEMEKEGKISKIGPENPYNTPVF AIKKKDS TKWRKLVDFRE
ISPIETVPVKLPGMDGPKVKQWPLTEEKIKALVEICTEMEKEGKISKIGPENPYNTPVF AIKKKDS TKWRKLVDFRE
ISPIDTVPVVKLPGMDGPRVKQWPLTEEKIKALVEICTEMEKEGKISRIGPENPYNTPFI AIKKKDG TKWRKLVDFRE

LNKRTQDFWEVQLGI PHPAGLKKKKS VTVDVGDAYFSVPLDEDFRKYTAFTI PSINNETPGIRYQYNVLPQGWKGSP
LNKRTQDFWEVQLGI PHPAGLKKKKS VTVDVGDAYFSVPLDKDFRKYTAFTI PSINNETPGIRYQYNVLPQGWKGSP
LNKKTQDFWEVQLGI PHPSGLKKKKS VTVDIGDAYFSVPLDKDFRKYTAFTVPSTNNETPGVRYQYNVLPMGWKGSP

AIFQSSMTKILEPFRKQNPDIVIYQYMDDLYVGS DLEIGQHRTKIEELRQHLLRWGLTTPDKKHQKEPPFLWMGYELH
AIFQSSMT WGF TTPDKKHQKEPPFLWMGYELH
AIFQCSMT WGLTTPDKKHQKDPFLWMGYELH

FIG. 17A

VVDKLV
SAGIRK
VFLD
GIDK
AQDE
HEKY
HSNW
RAMA
SDFN
LPV
VAK
EIV
ASCD
KQL
KGE
AMH
GQV
DCS
PGI
WQL
DLC

FIG. 17B

THLEGGVILVAVHVASGYIEAEVI PAETGQETAYFLKLKLAGRWPVKTIHTDNGSNFTGATVRAACWWAGIKQEEFGIPY
THLEGGKIILVAVHVASGYIEAEVI PAETGQETAYFLKLKLAGRWPVKTIHTDNGSNFTGATVRAACWWAGIKQEEFGIPY
THLEGGKVIILVAVHVASGYIEAEII PTEGTGQETAYFII LKLKLAGRWPVTIT
NPQSQGVVESMNKELKKIIGQVRDQAEHLKTAVMQMAVFIHNFKRKGGIGGYSAGERIVDIIATDIIQTKELQKQITKIQ
NPQSQGVVESMNKELKKIIGQVRDQAEHLKTAVMQMAVFIHNFKRKGGIGGYSAGERIVDIIATDIIQTKELQKQITKIQ
NTQSQGVVESMNNELKKIIGQIRDQAEHLKTAVMQMAVLIHNFKRKGGIGEYSAGERIIDIILIA
NTQSQGVVESMNNELKKIIGQIRDQAEHLKTAVMQMAVLIHNFKRKGGIGE
NTQSQGVVESMNNELKKIIGQIRDQAEHLKTAVMQMAVLIHNFKRKGGIGE
NFRVYYRDSRNPWLKGPAPKLLWKGEAVVIQDNSDIKVVPRRKAKIIRDYKQKQMGAGDDCVASRQDEDED
NFRVYYRDSRNPWLKGPAPKLLWKGEAVVIQDNSDIKVVPRRKAKIIRDYKQKQMGAGDDCVASRQDEDED
NFRVYYRDSRNPWLKGPAPKLLWKGEAVVIQDNSEIKVVPRRKAKIIRDYKQKQMGAGDDCVASRQDEDED

FIG. 17C

FIG. 18

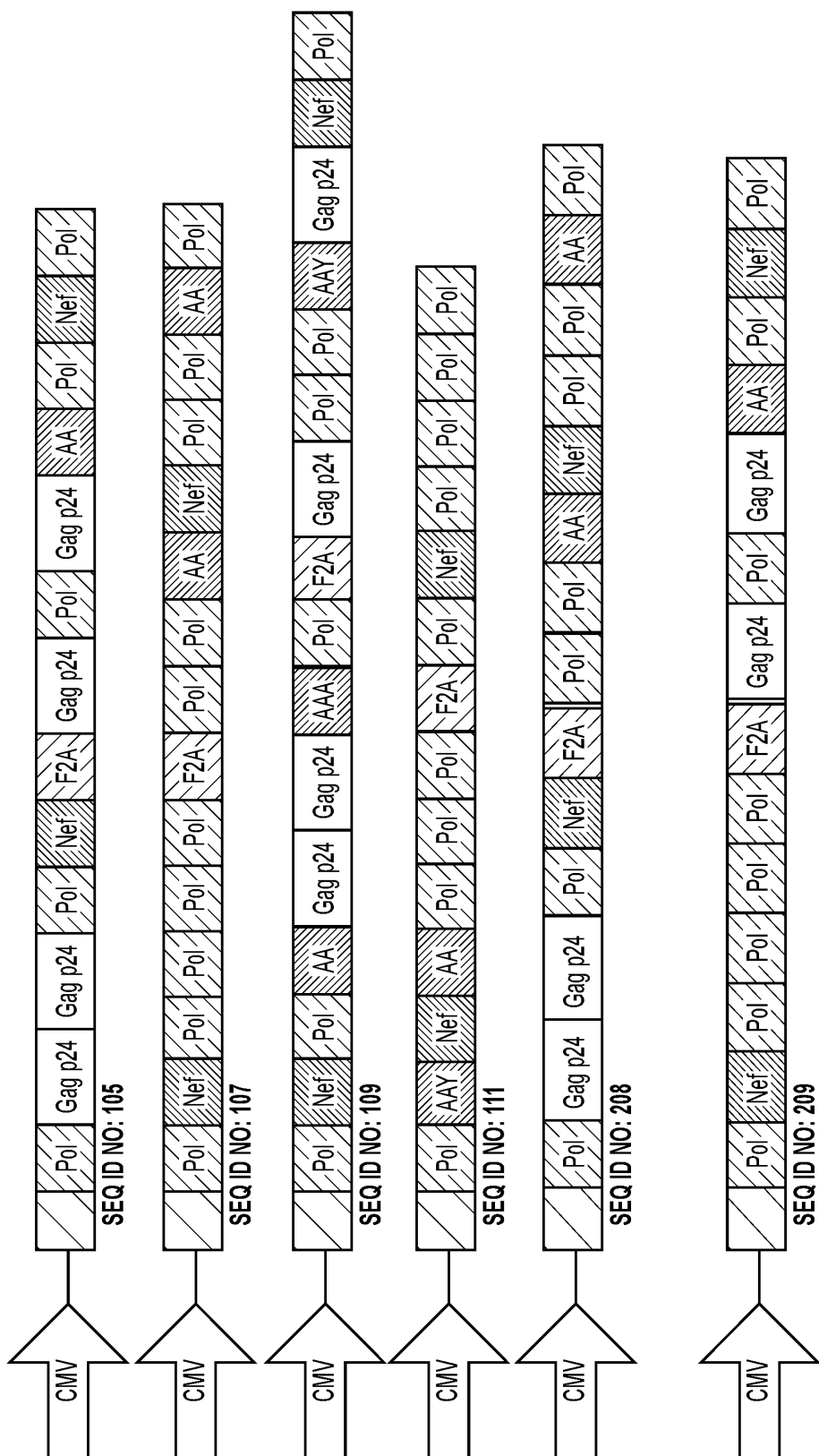


FIG. 19

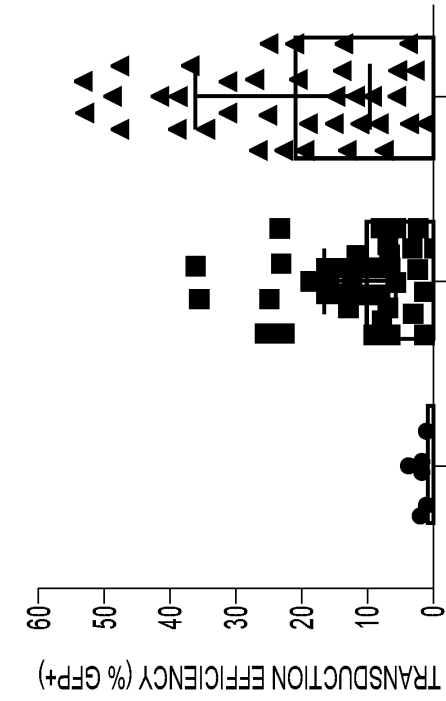


FIG. 20B

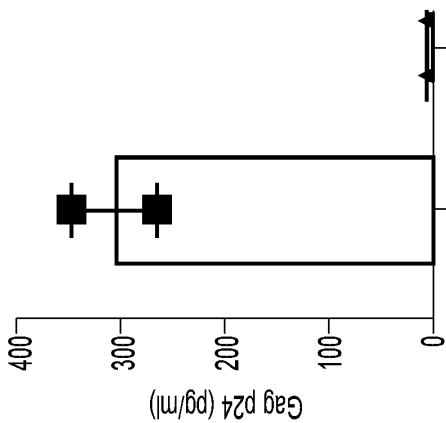
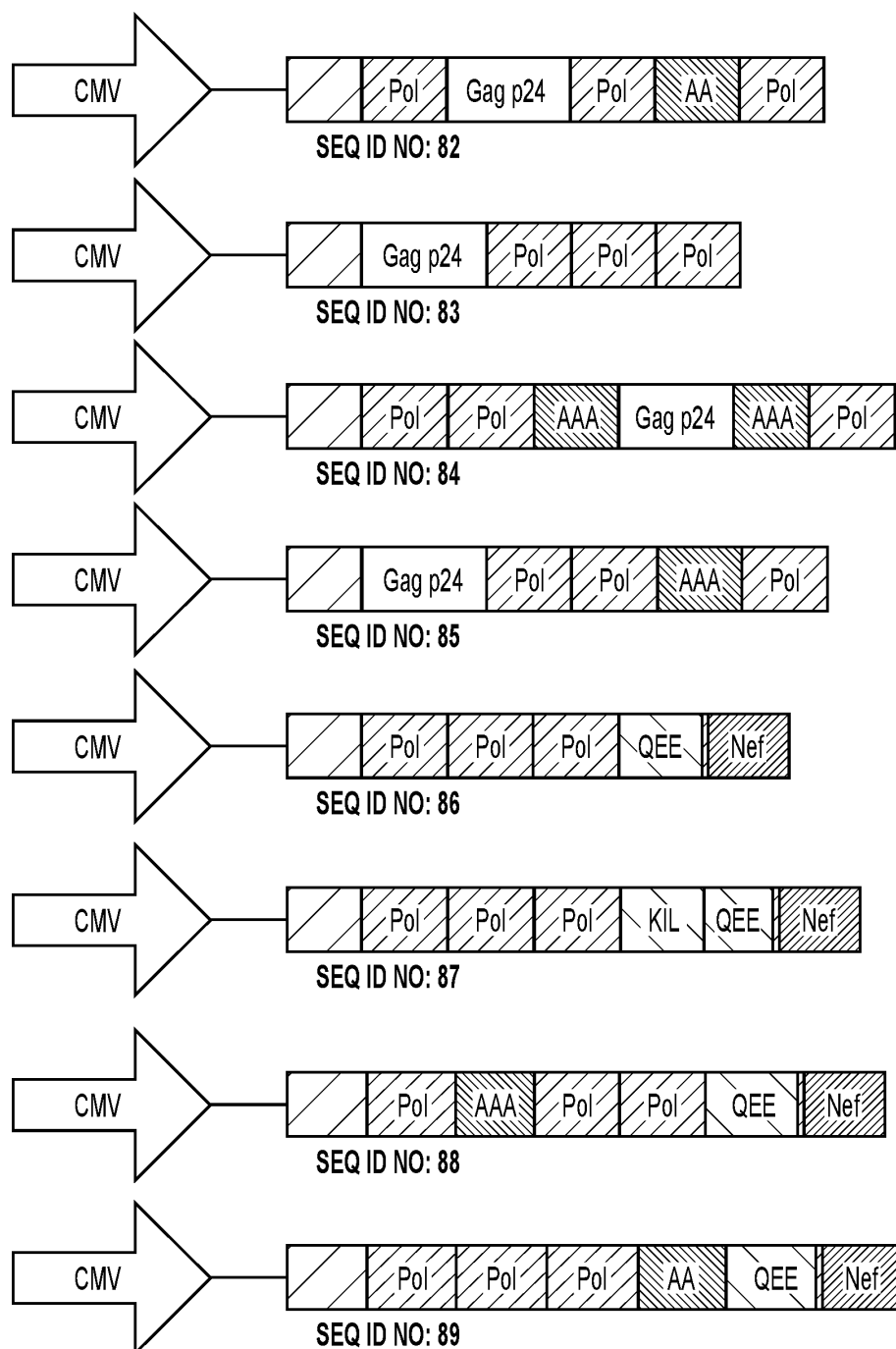


FIG. 20A

**FIG. 21**

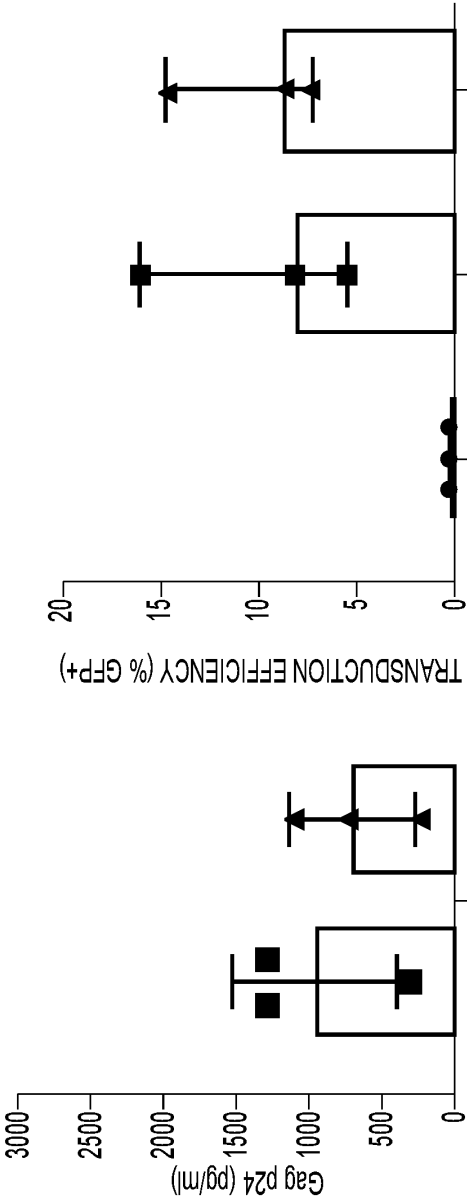


FIG. 22B

FIG. 22A

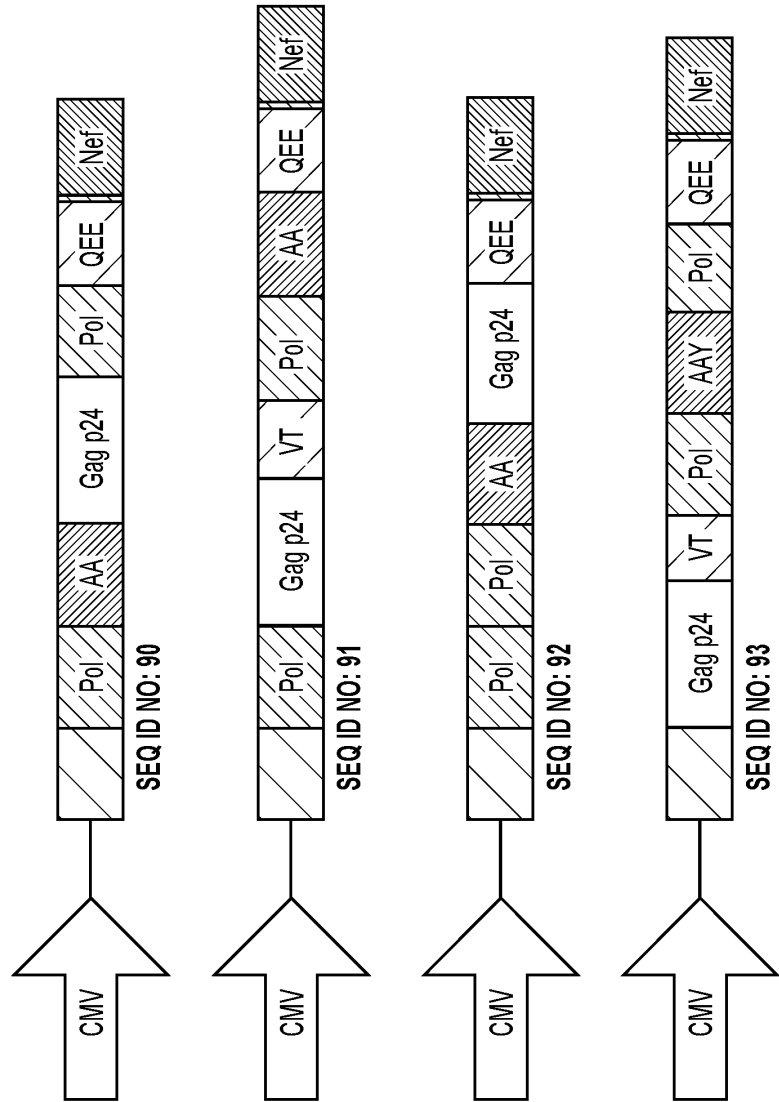


FIG. 23

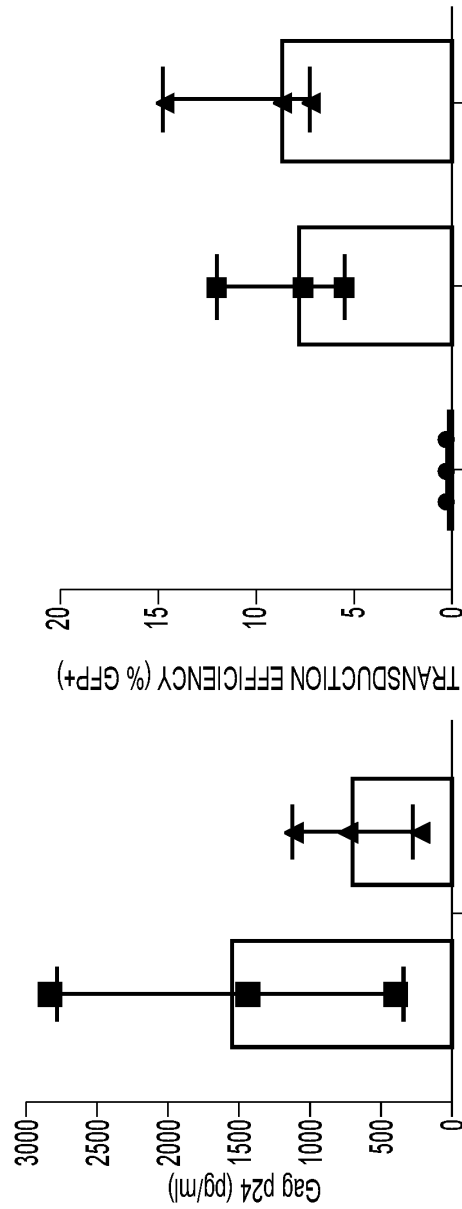
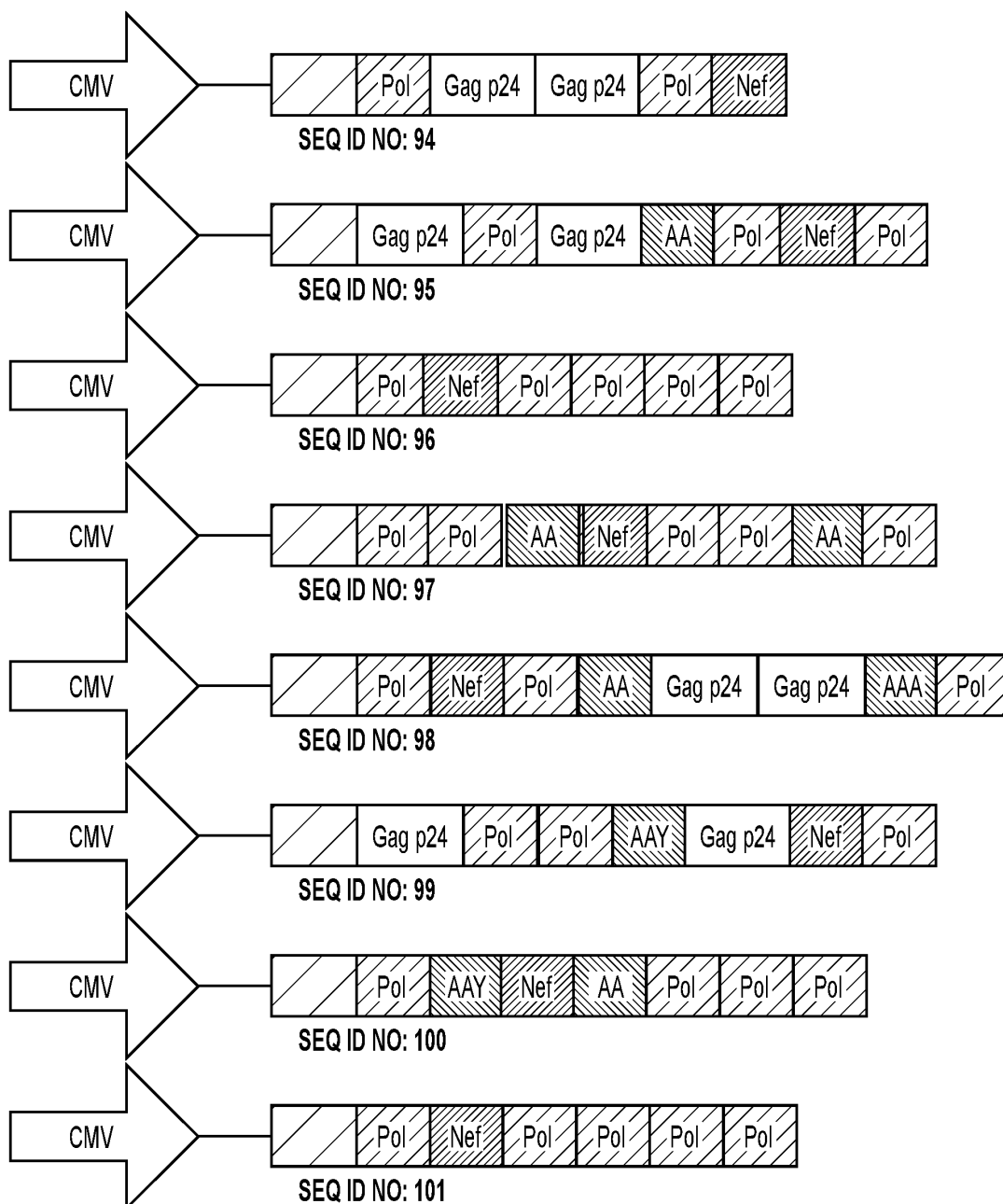


FIG. 24B

FIG. 24A

**FIG. 25**

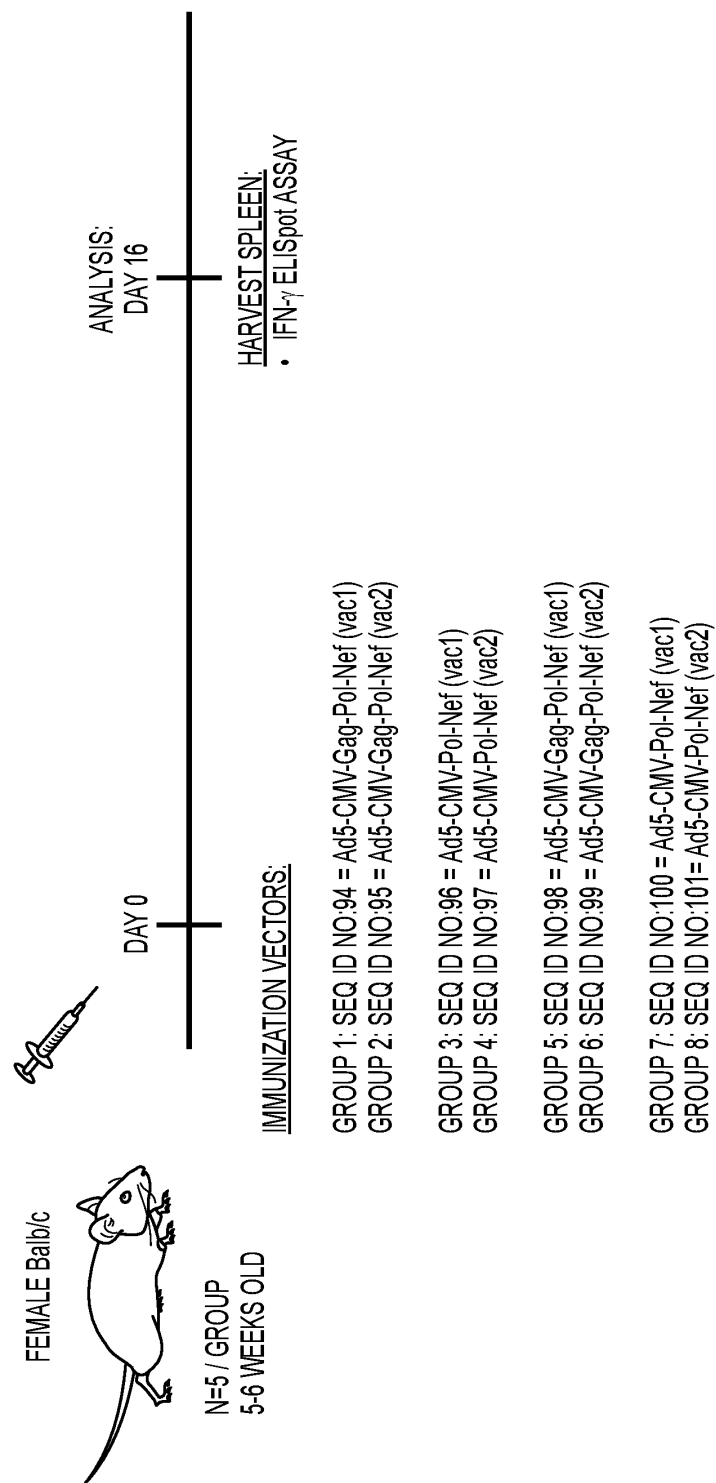


FIG. 26

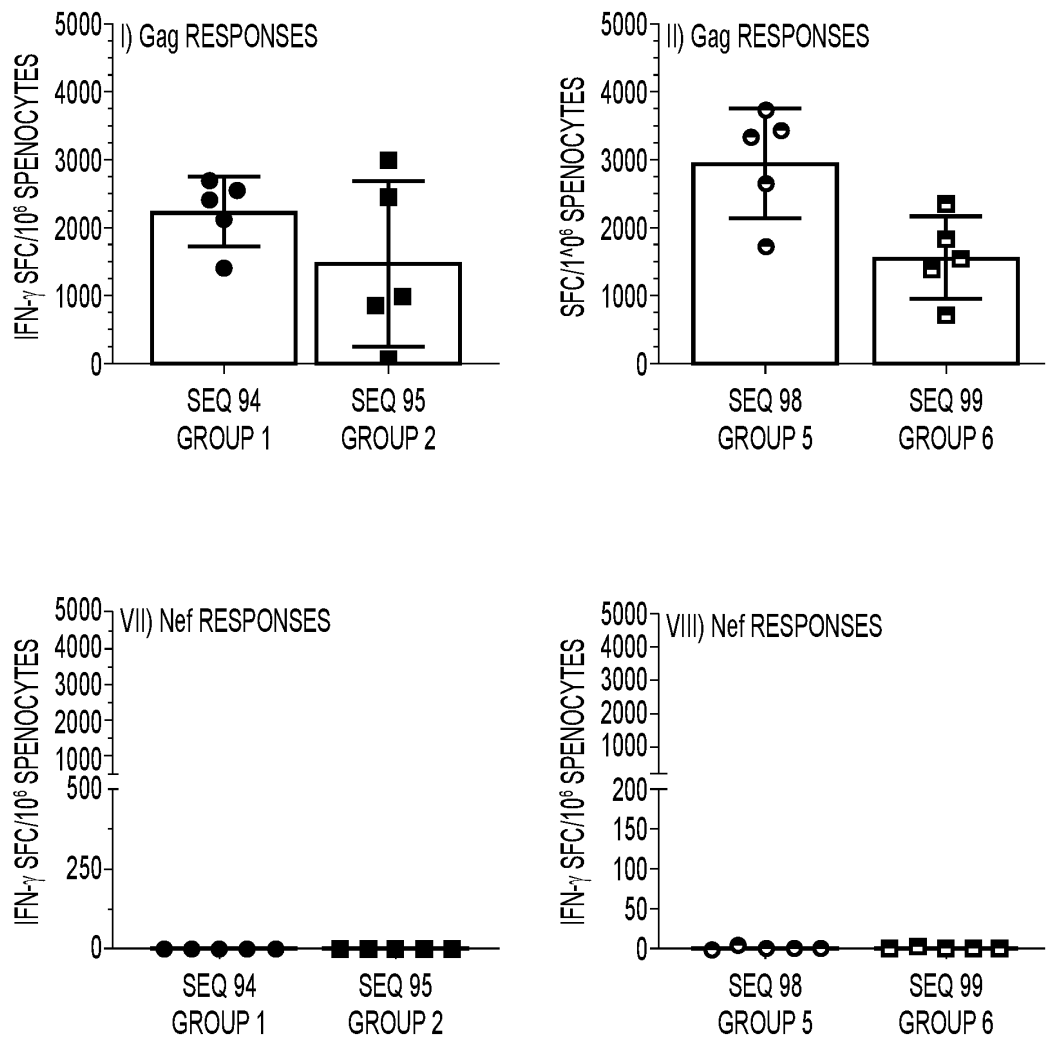


FIG. 27A

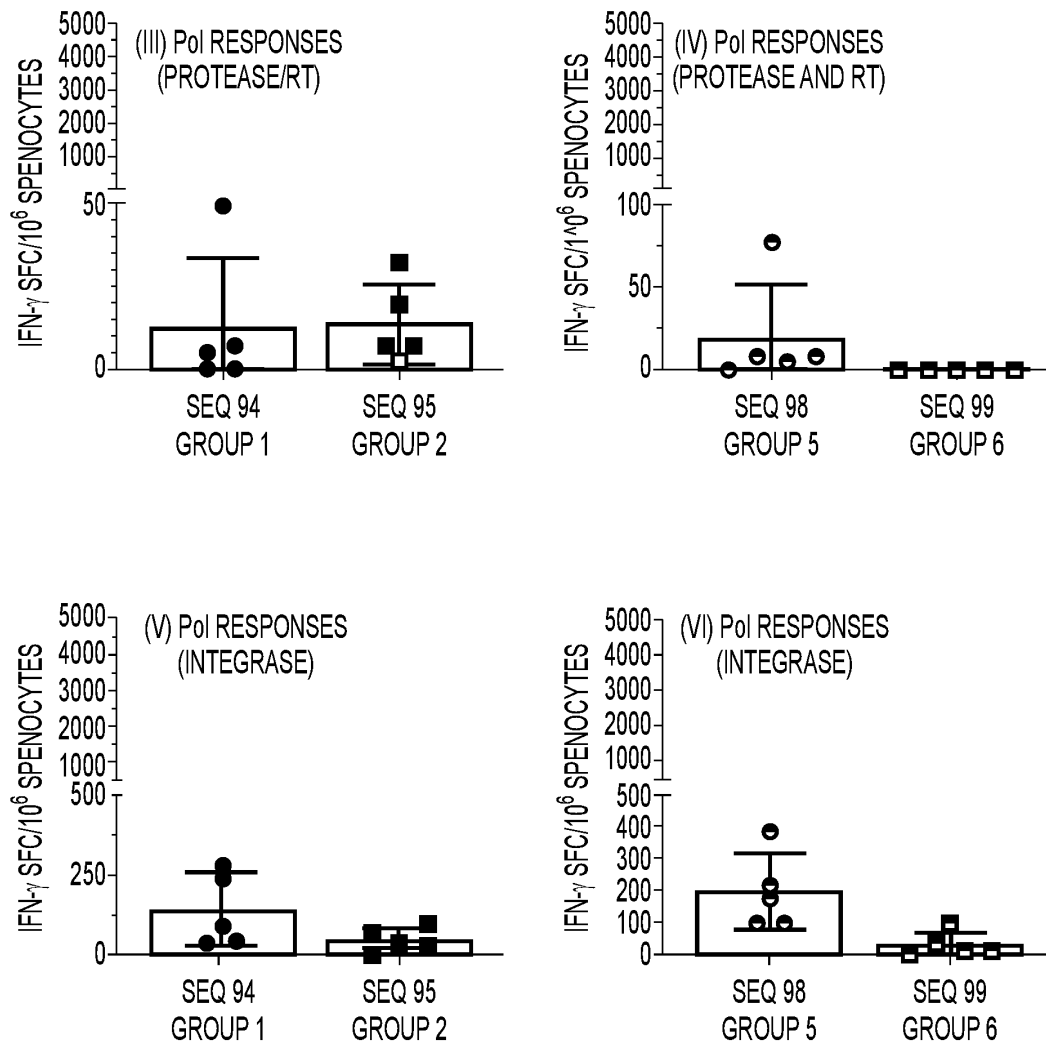


FIG. 27B

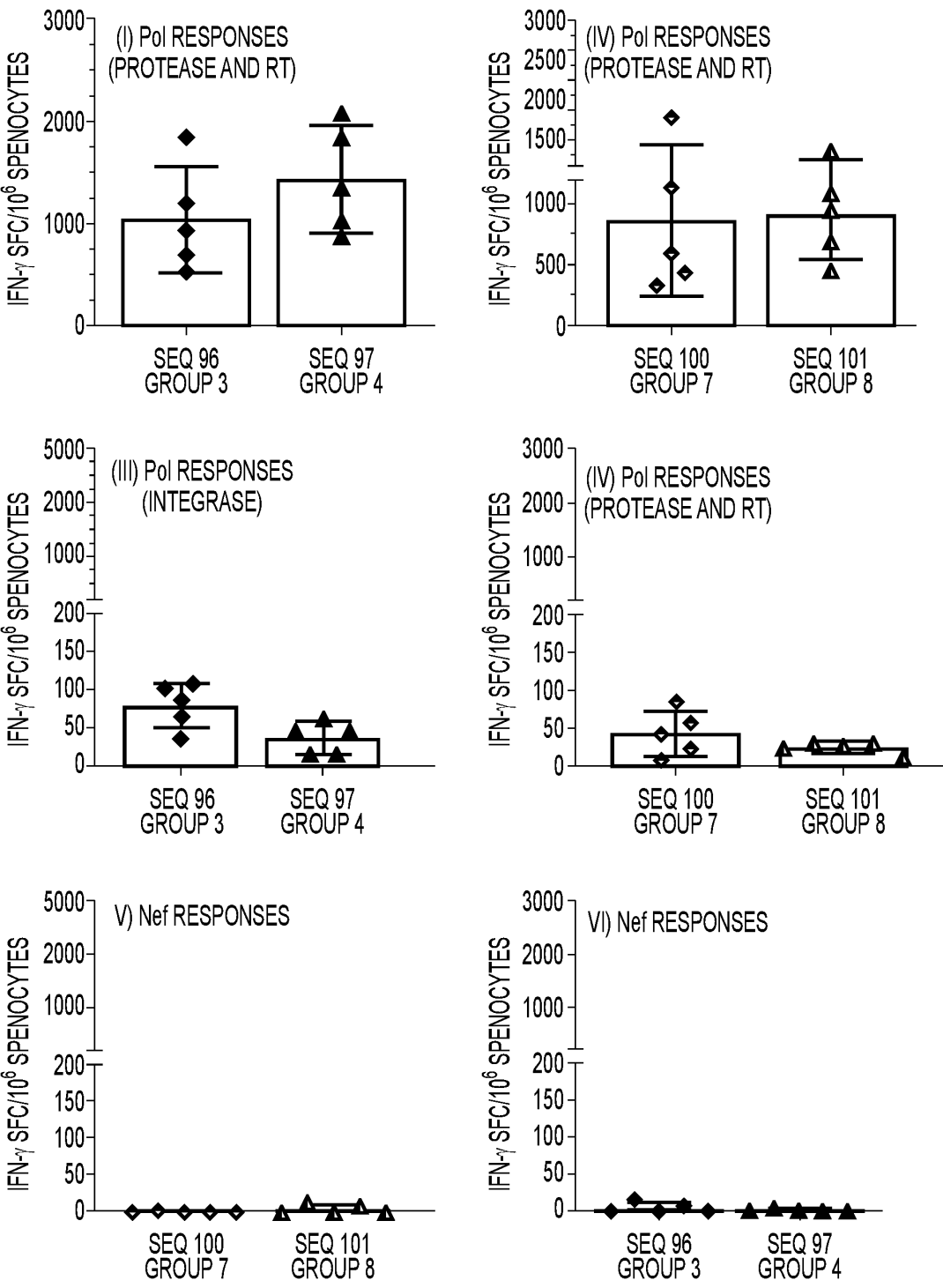


FIG. 28

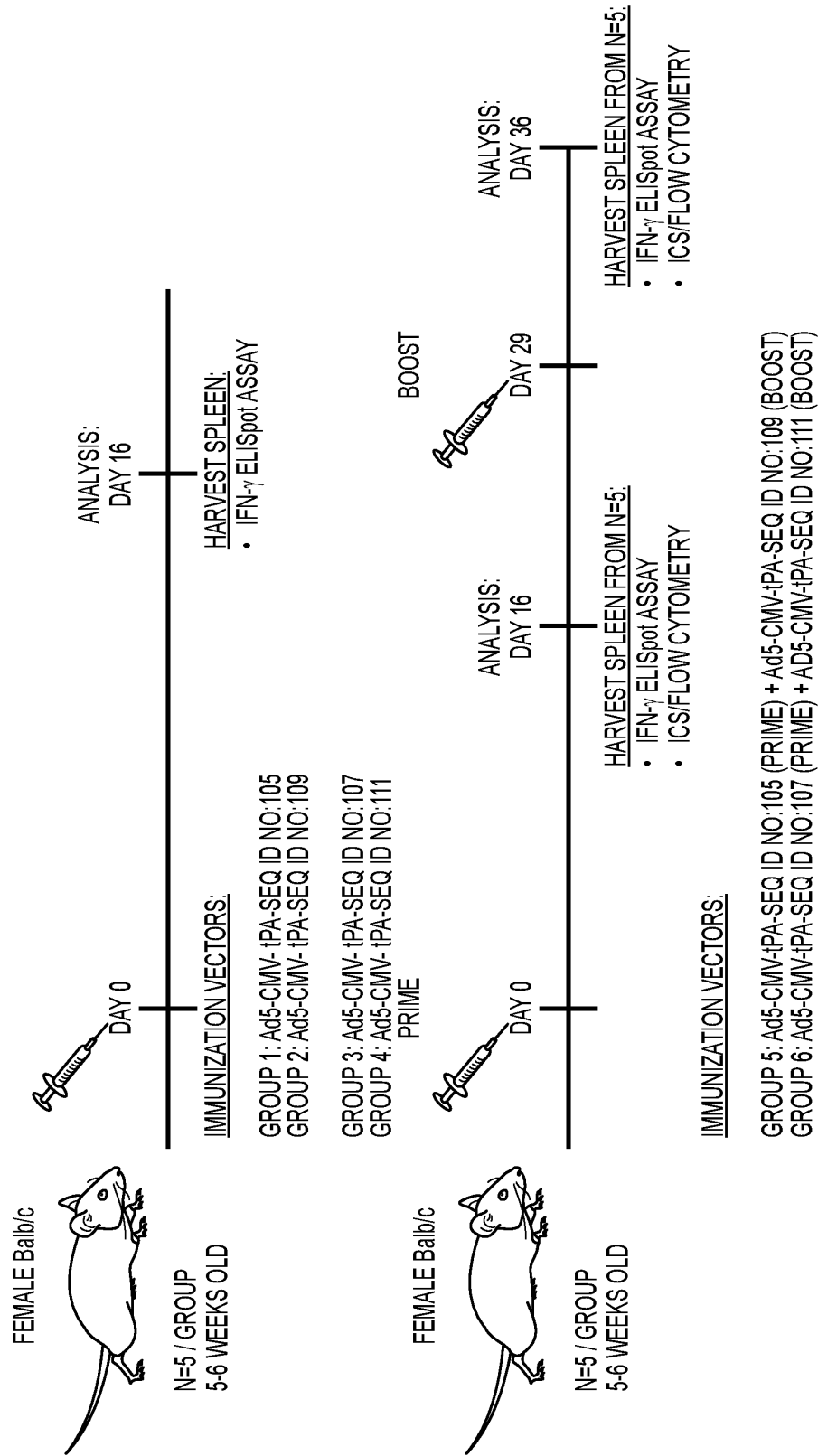


FIG. 29

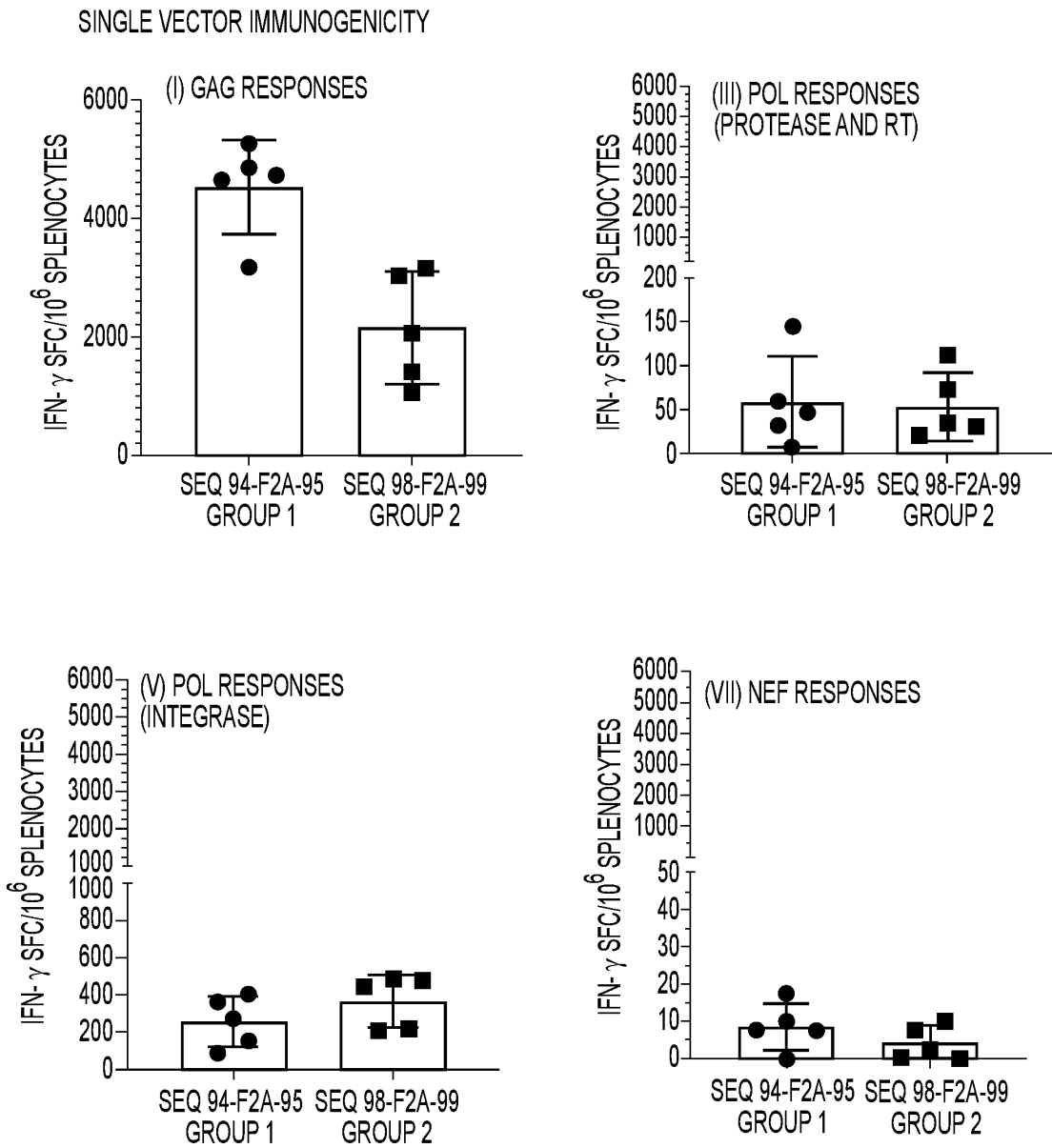


FIG. 30A

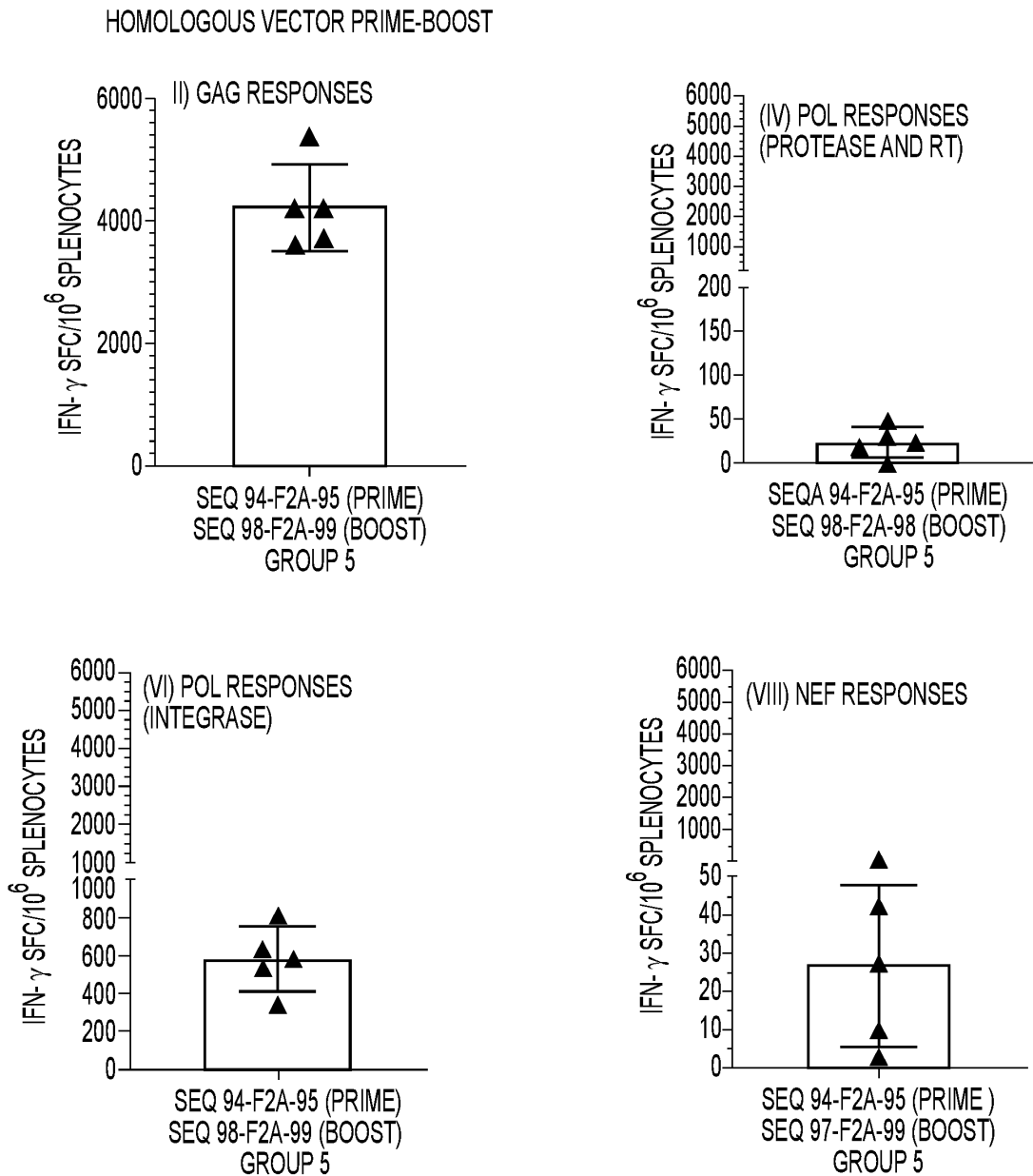


FIG. 30B

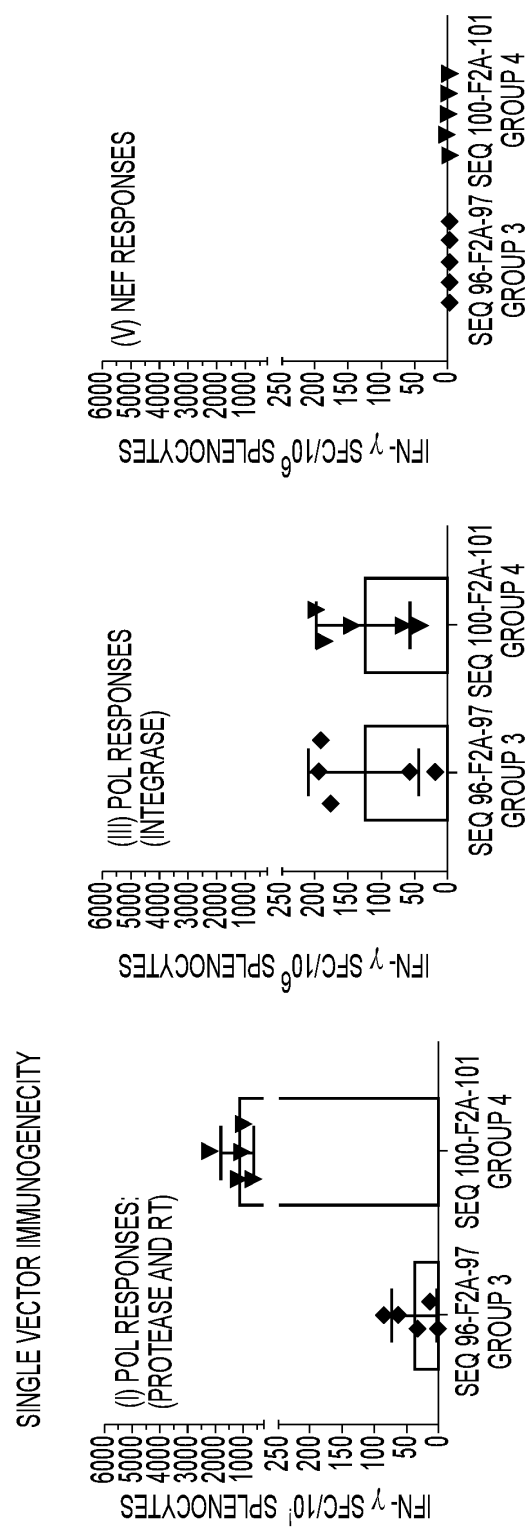


FIG. 31A

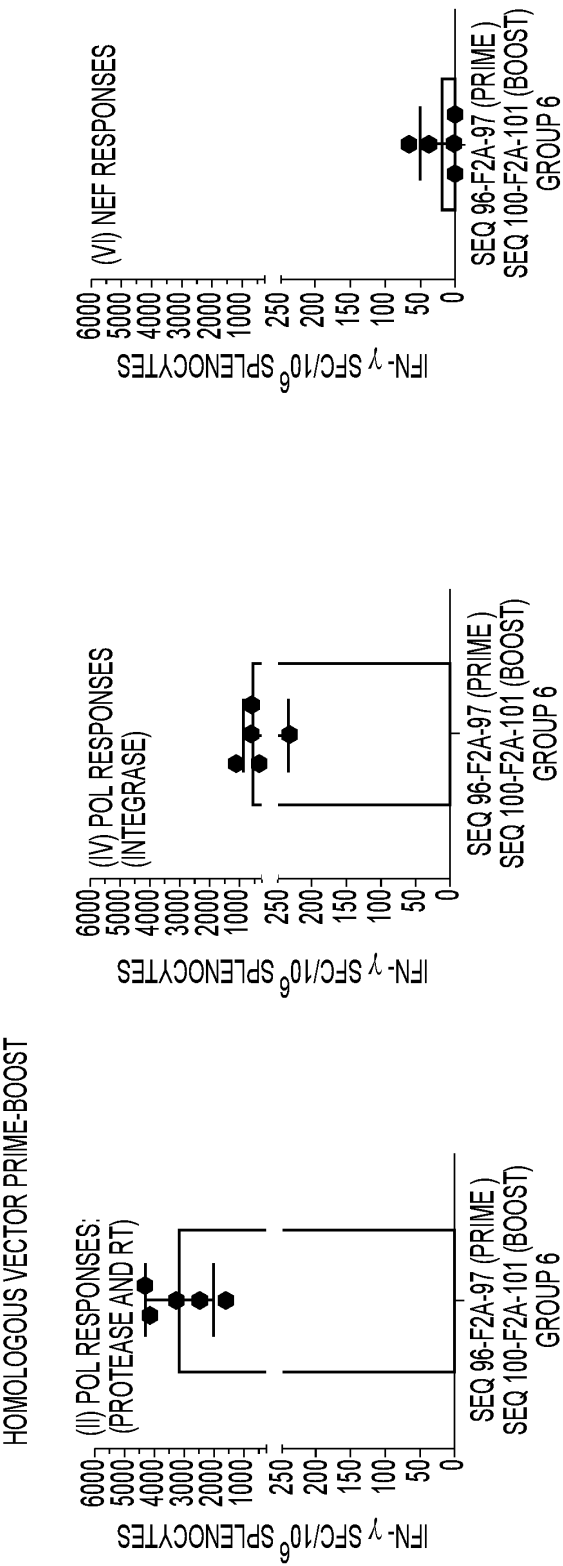


FIG. 31B

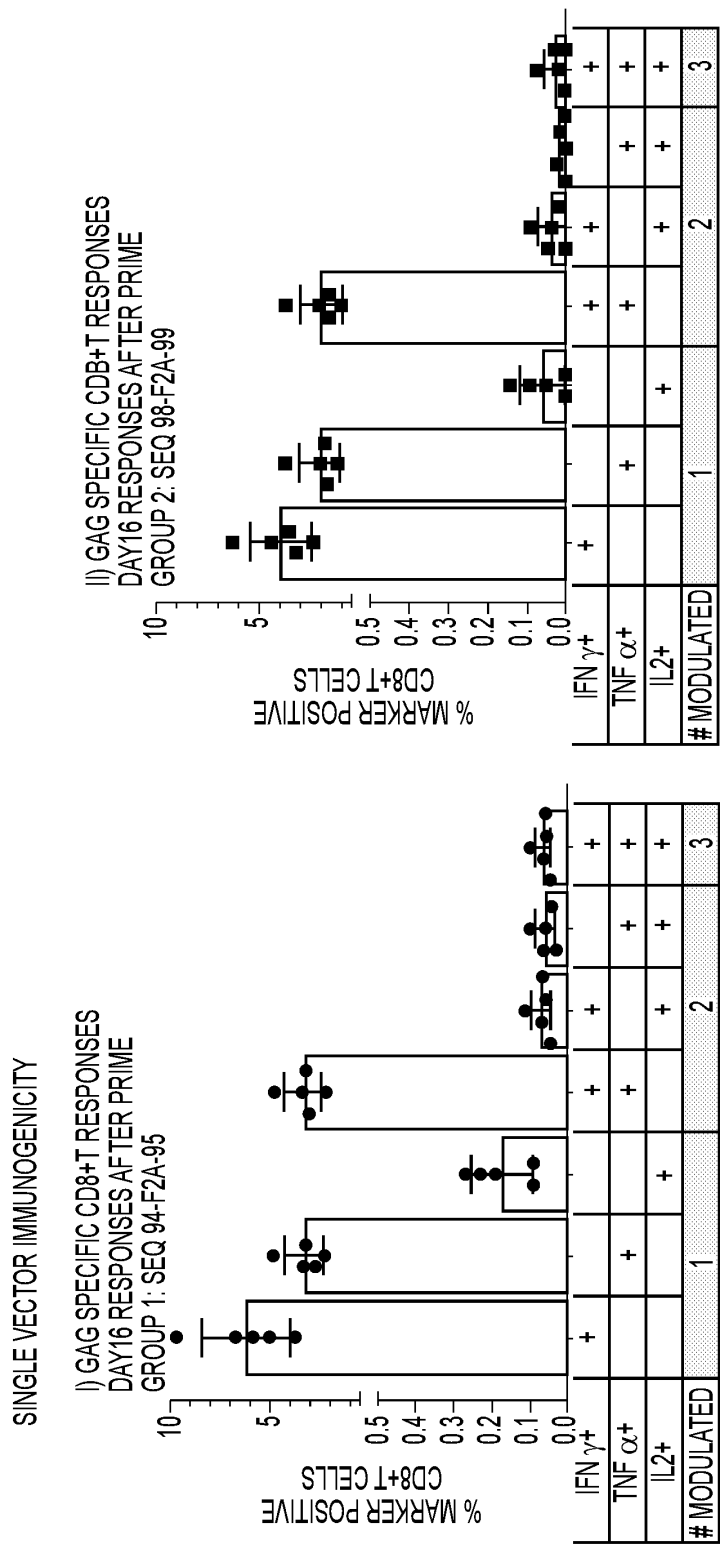


FIG. 32A

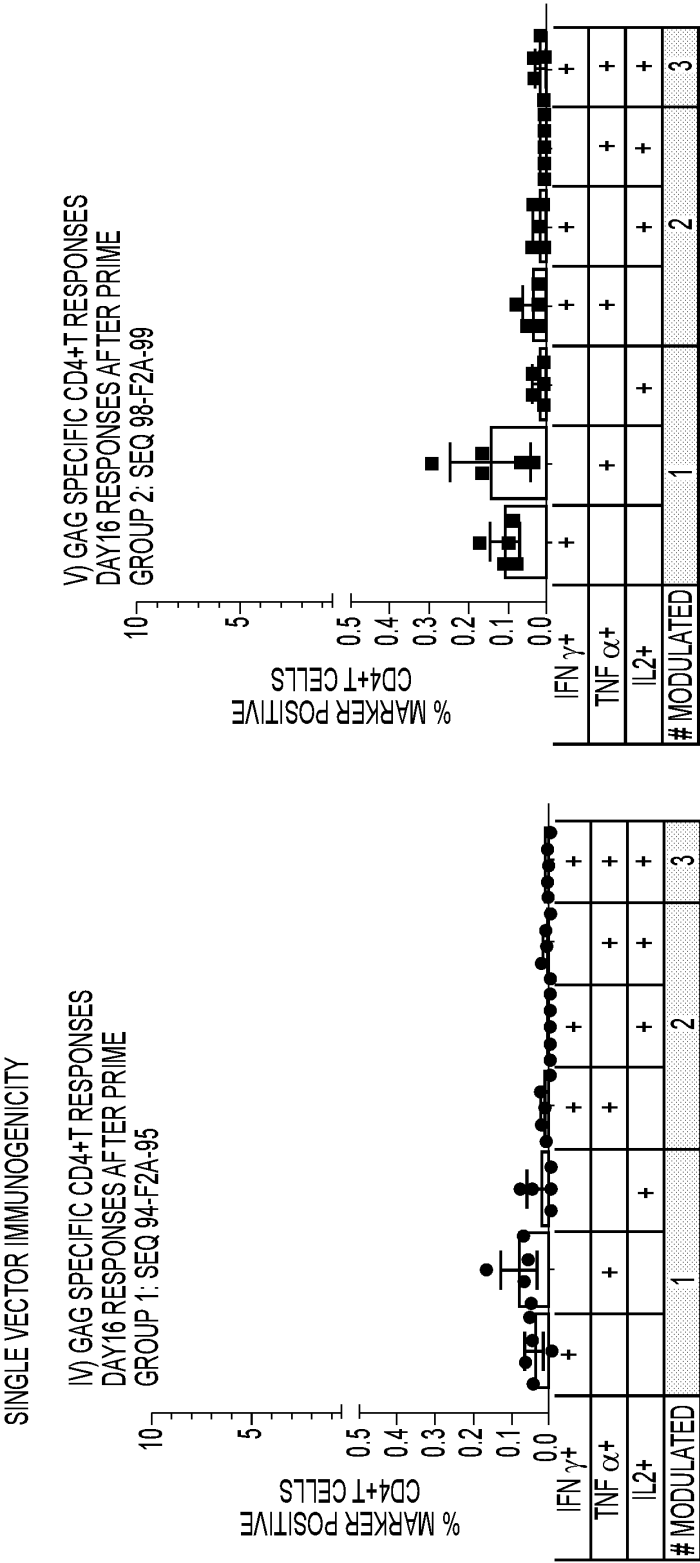


FIG. 32B

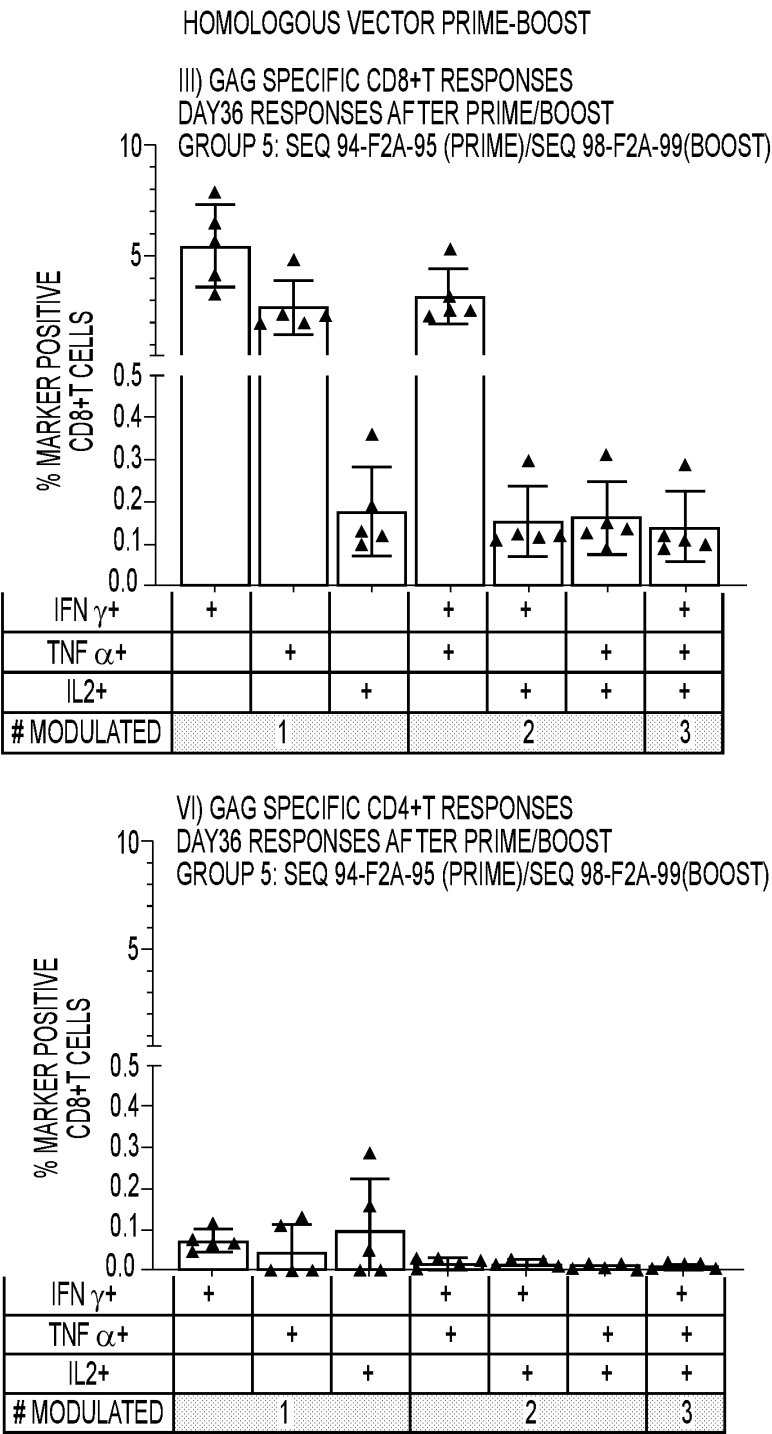


FIG. 32C

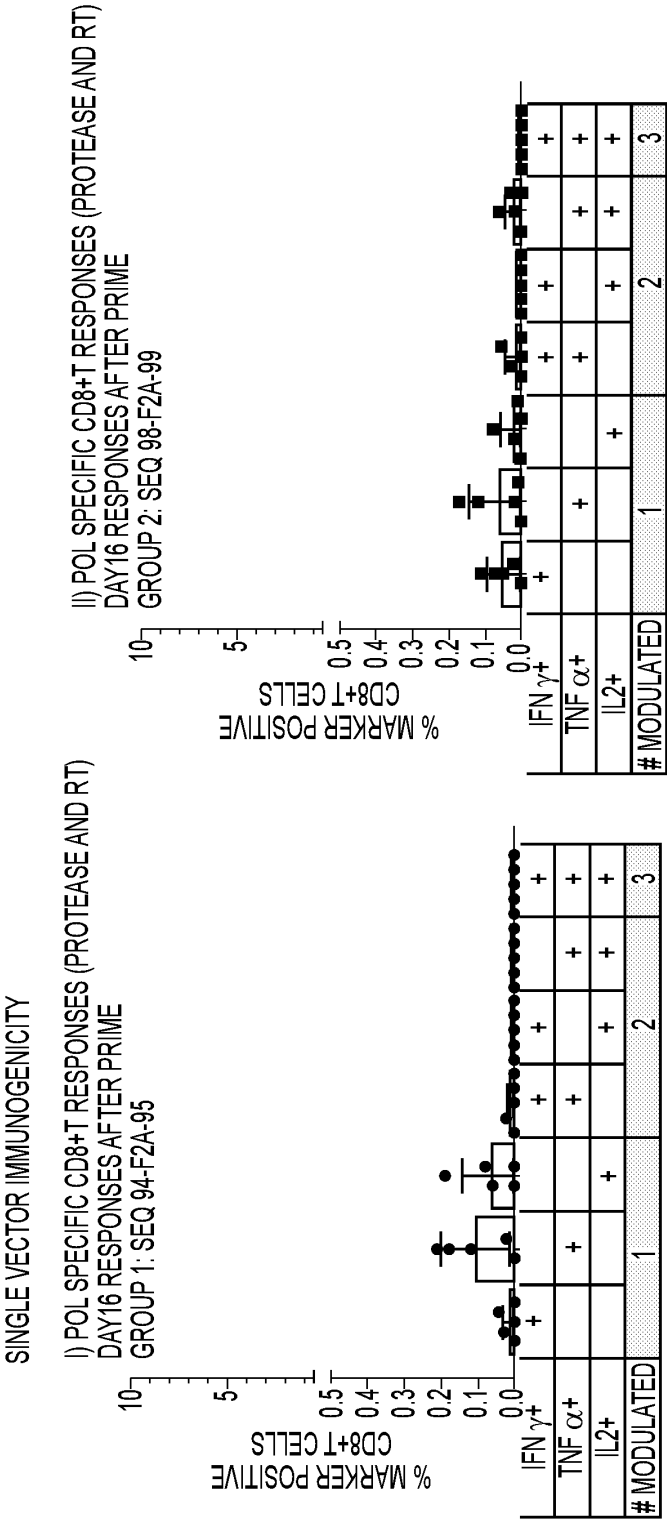


FIG. 33A

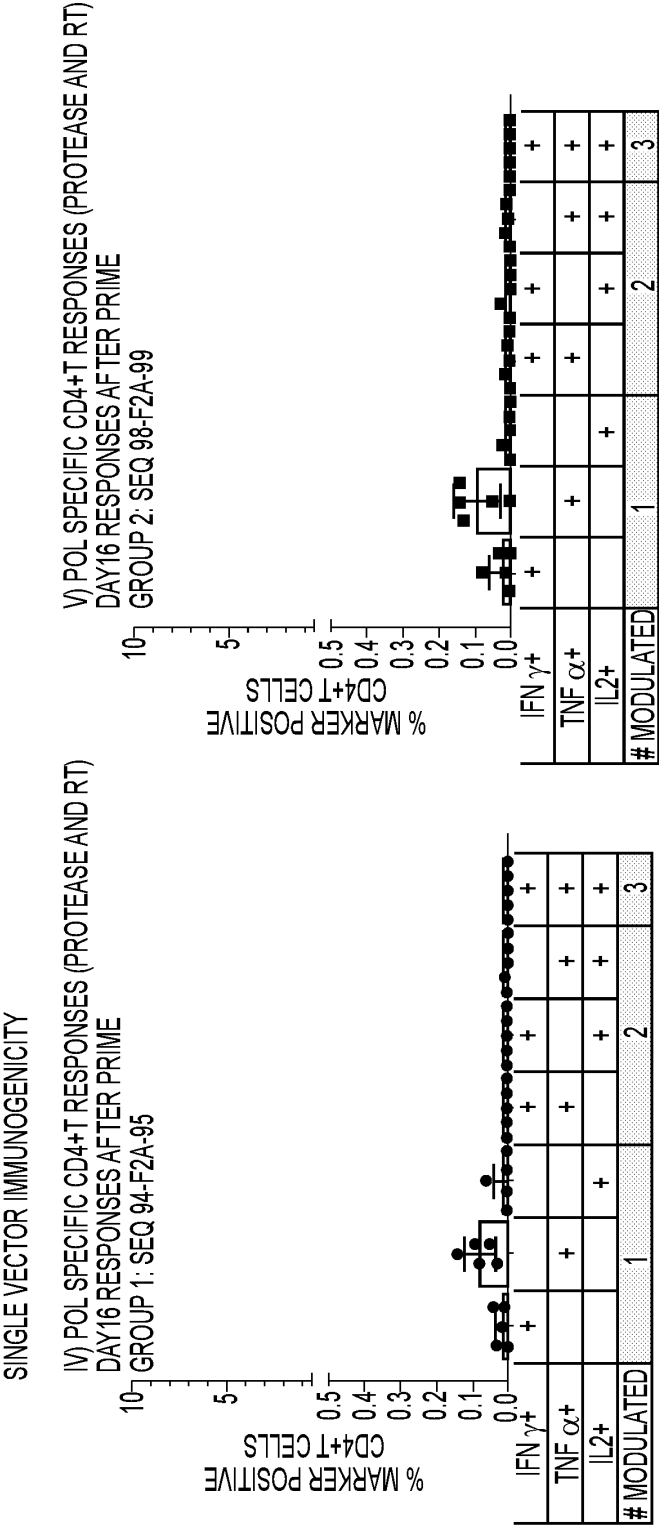


FIG. 33B

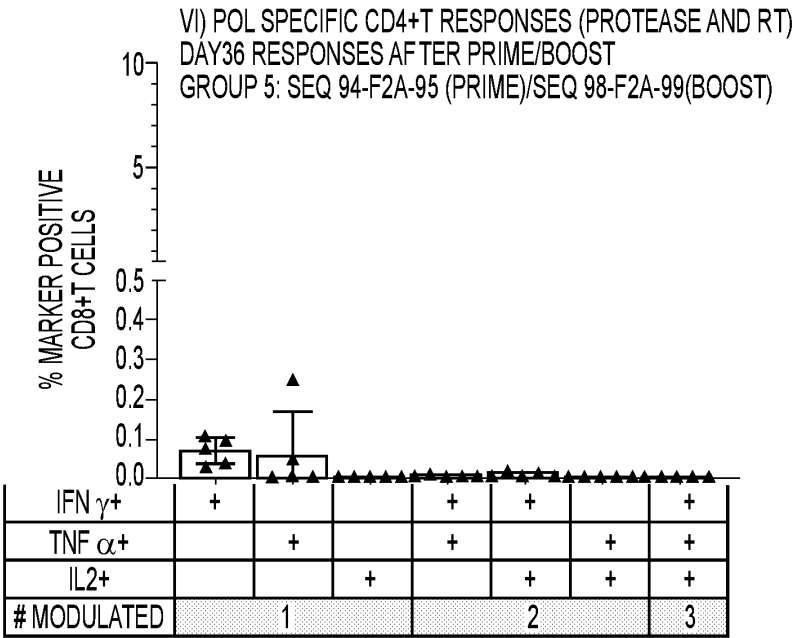
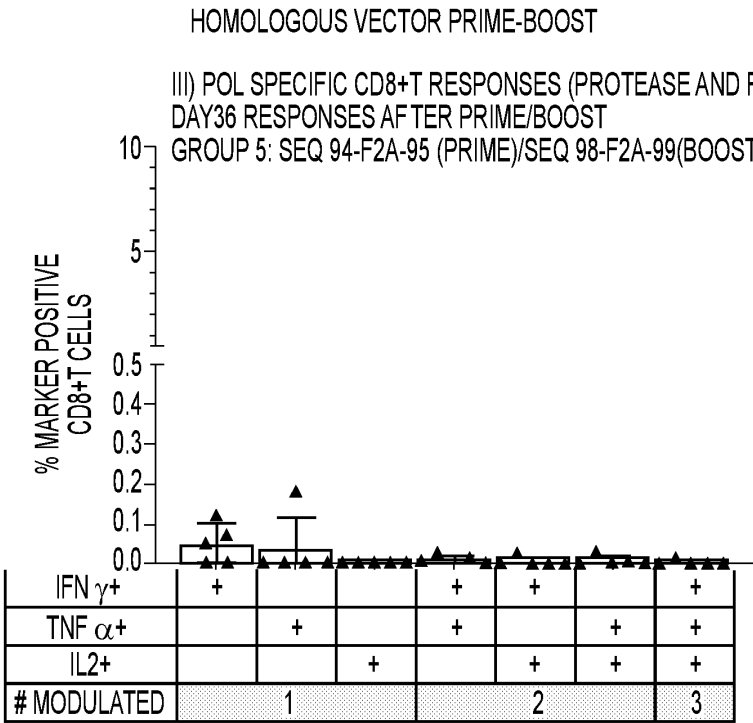


FIG. 33C

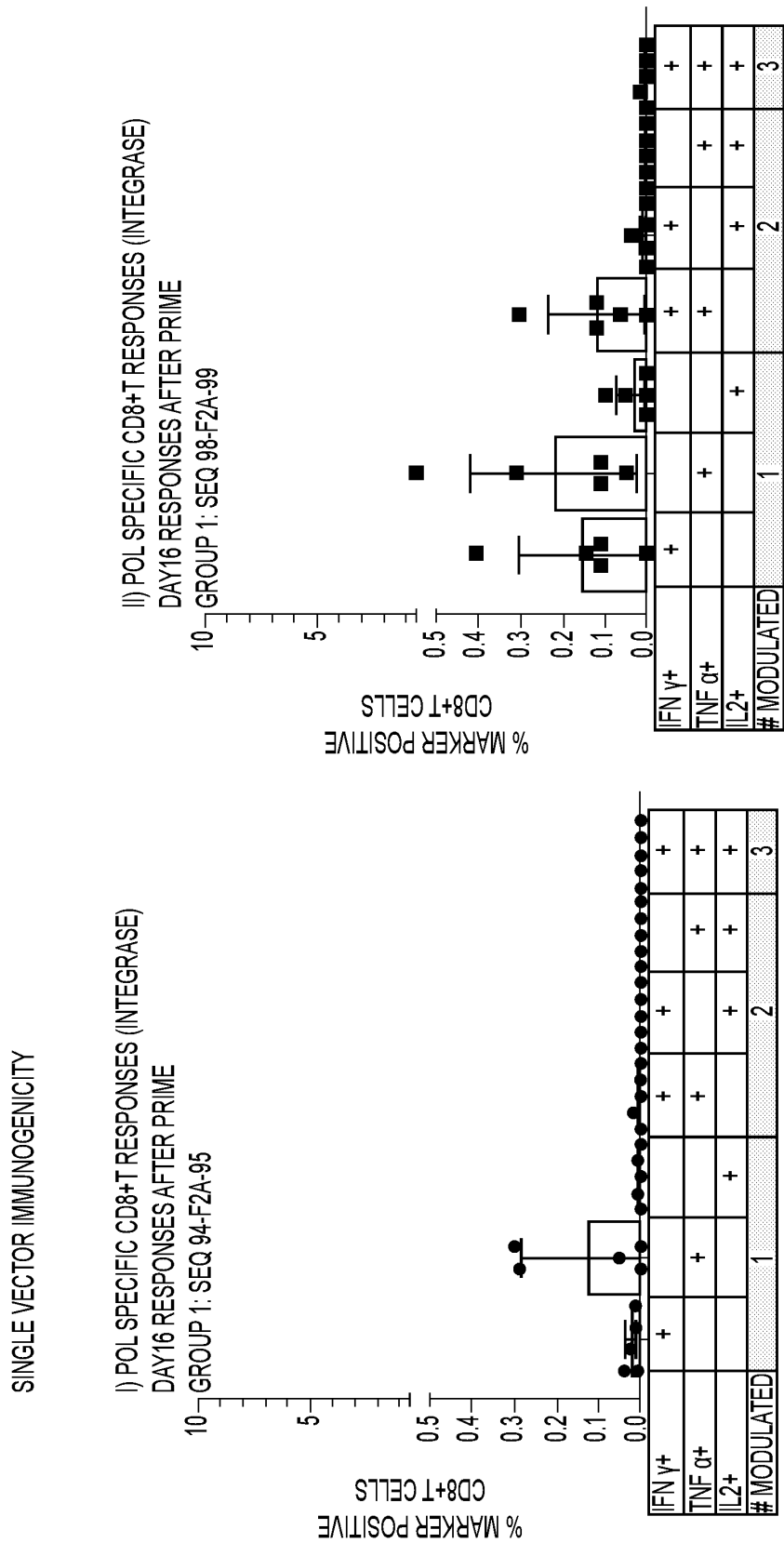


FIG. 34A

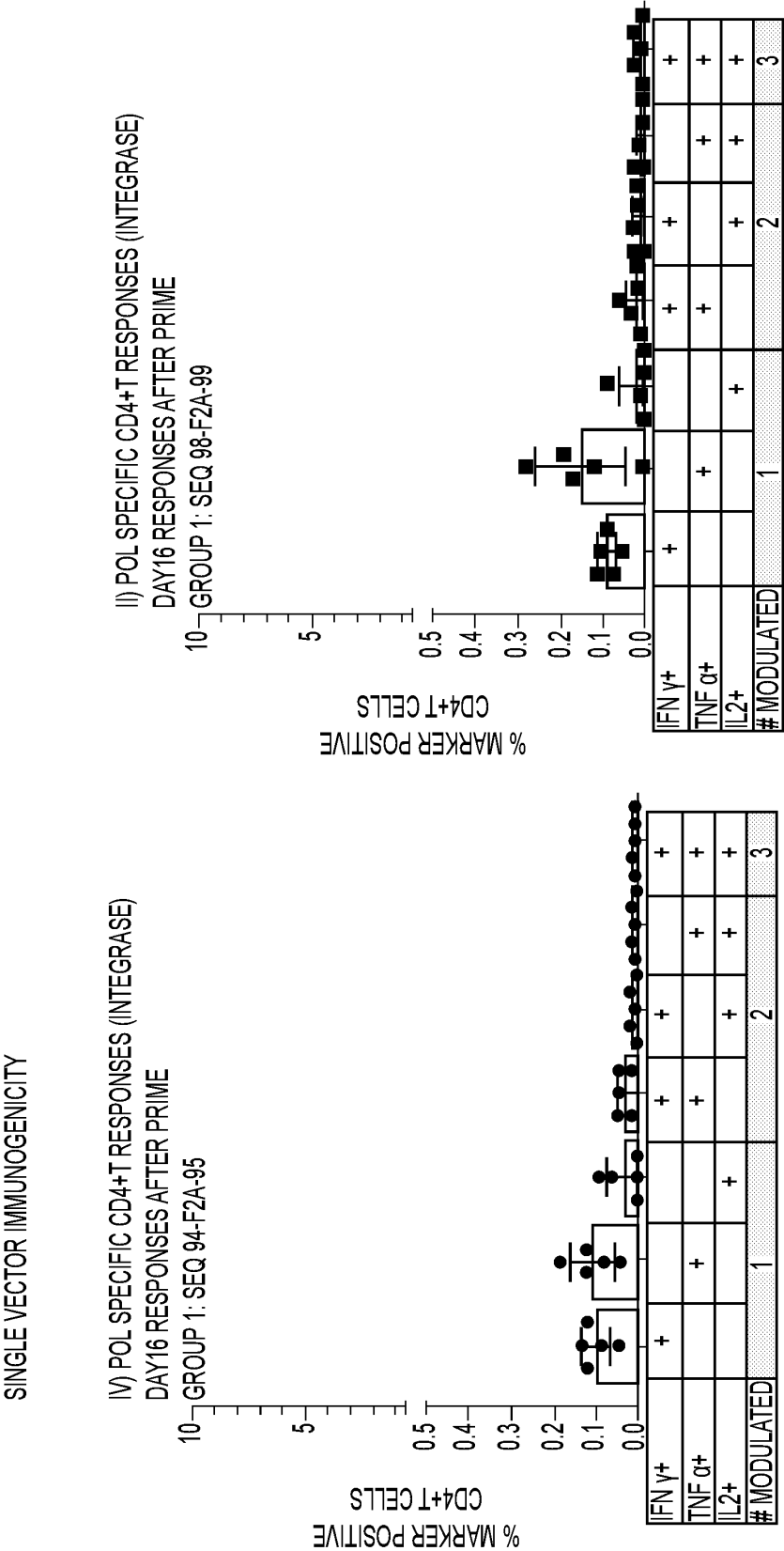


FIG. 34B

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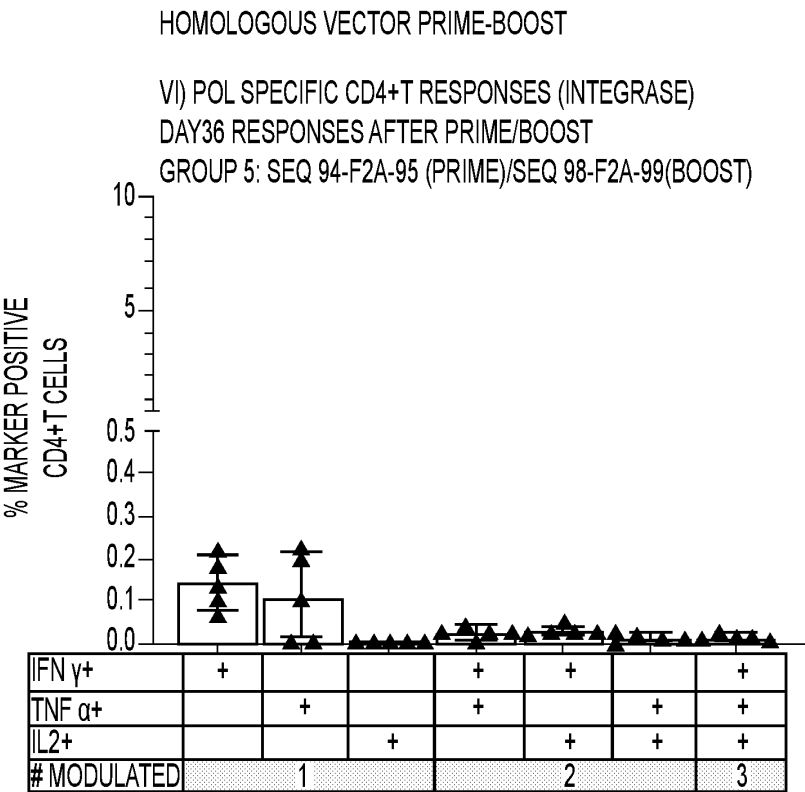
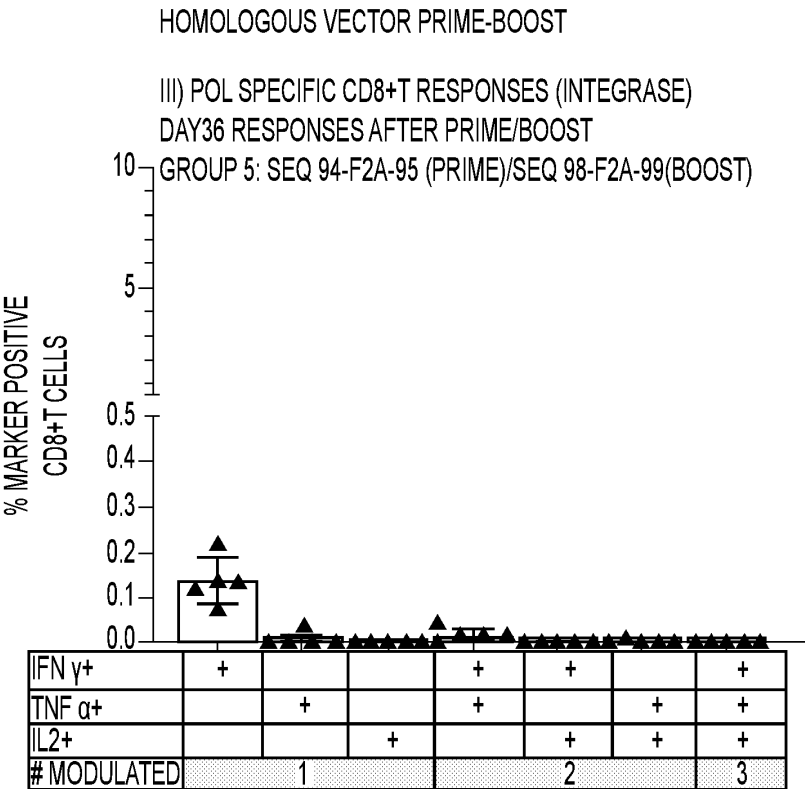


FIG. 34C

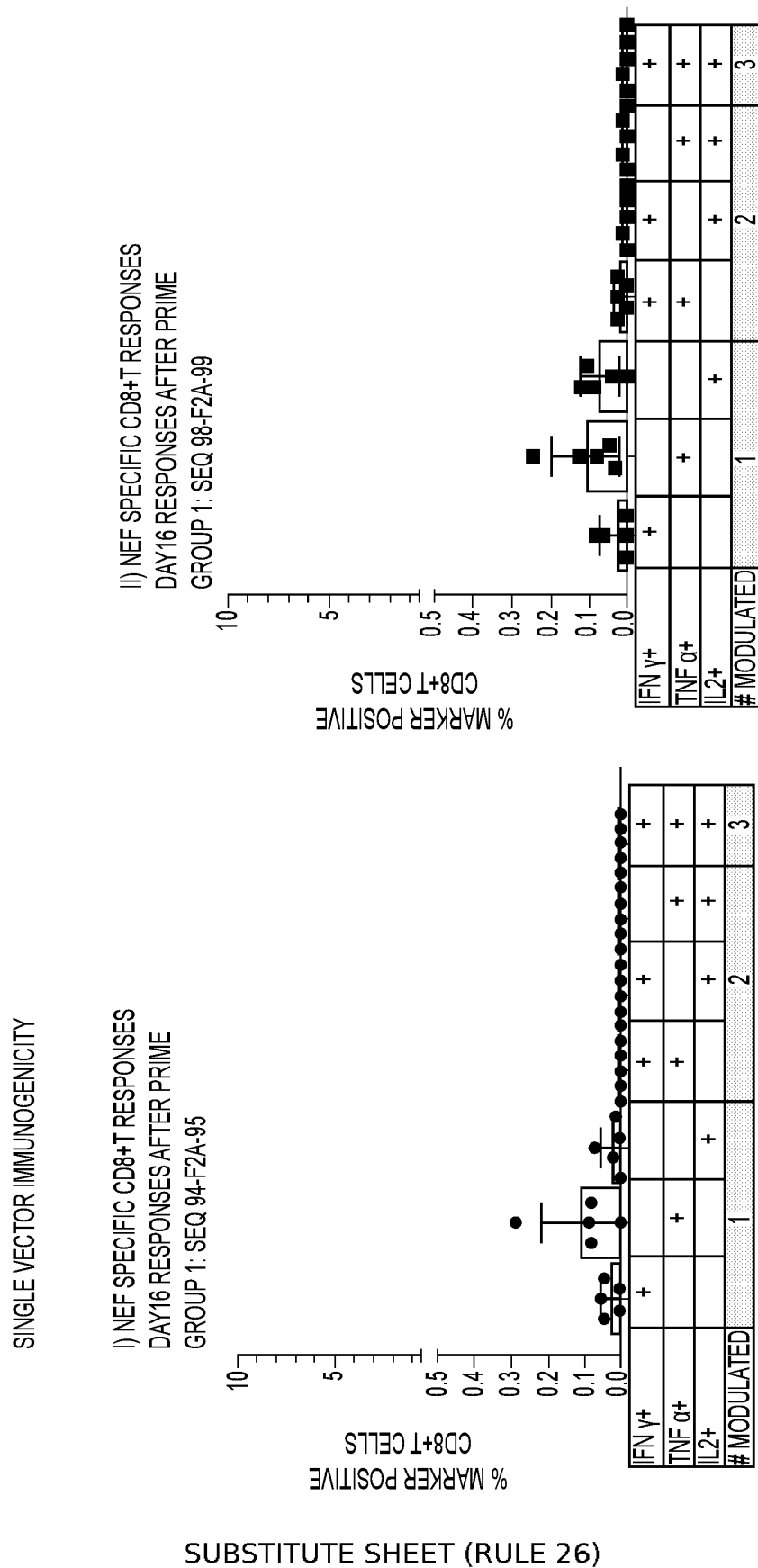


FIG. 35A

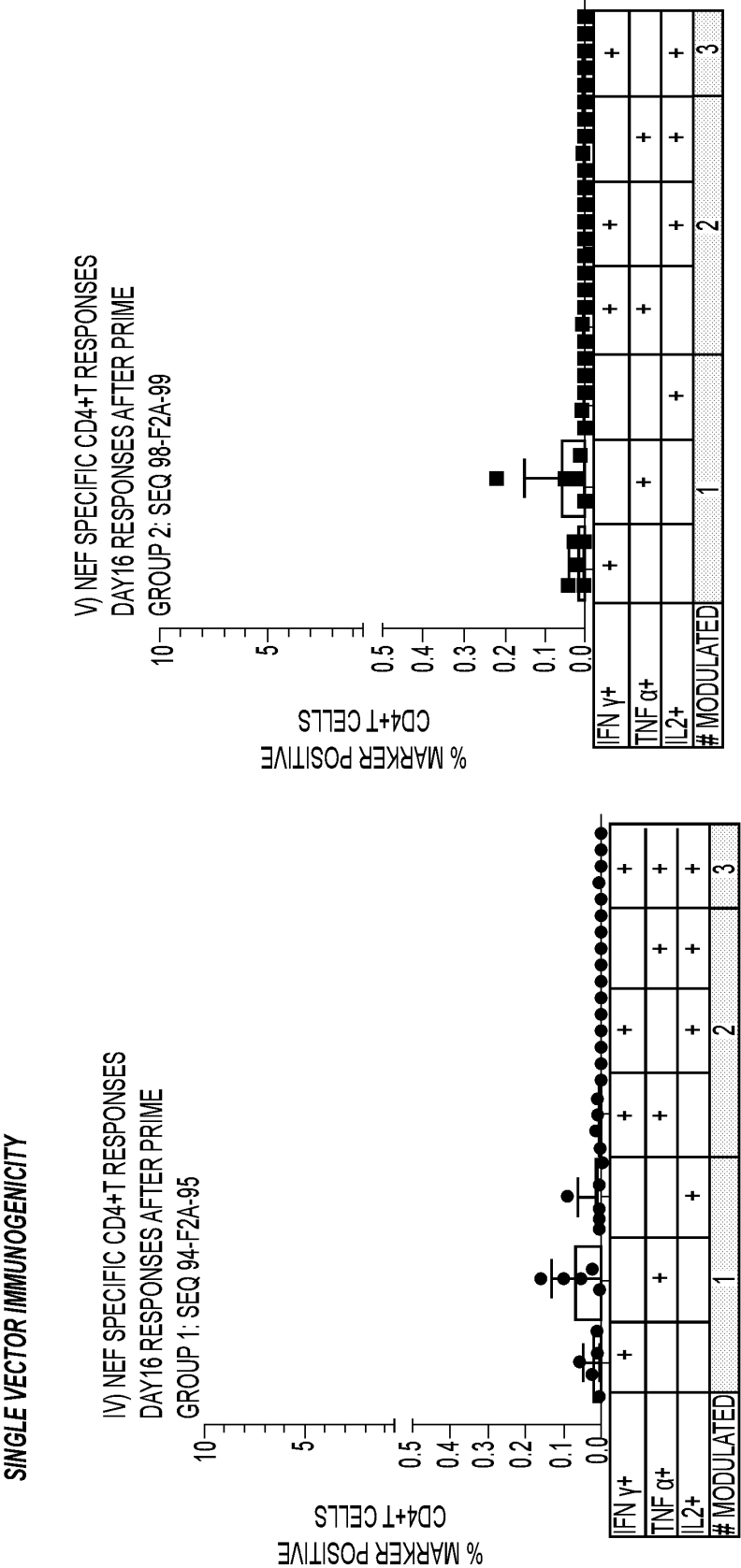


FIG. 35B

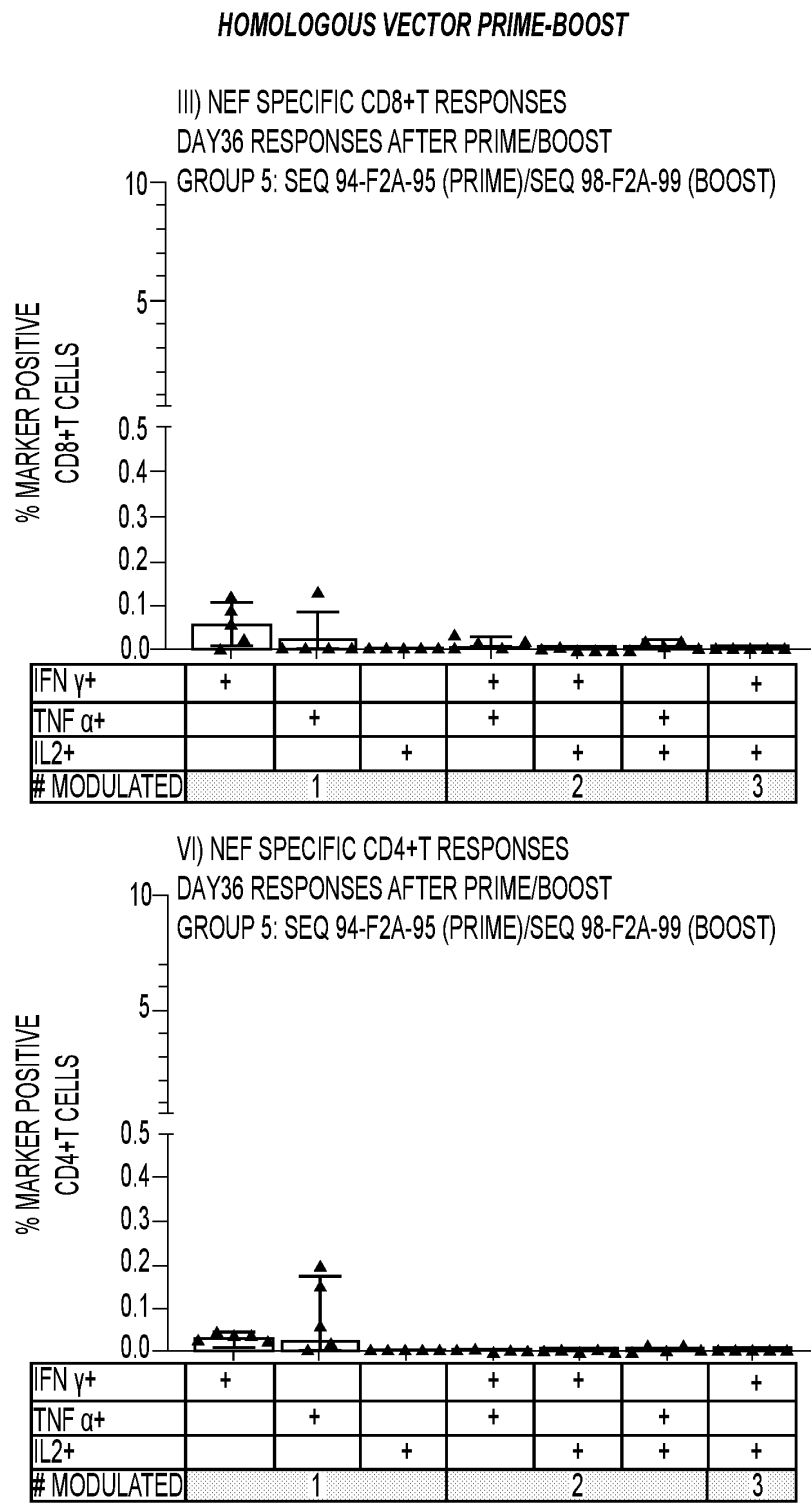


FIG. 35C

SUBSTITUTE SHEET (RULE 26)

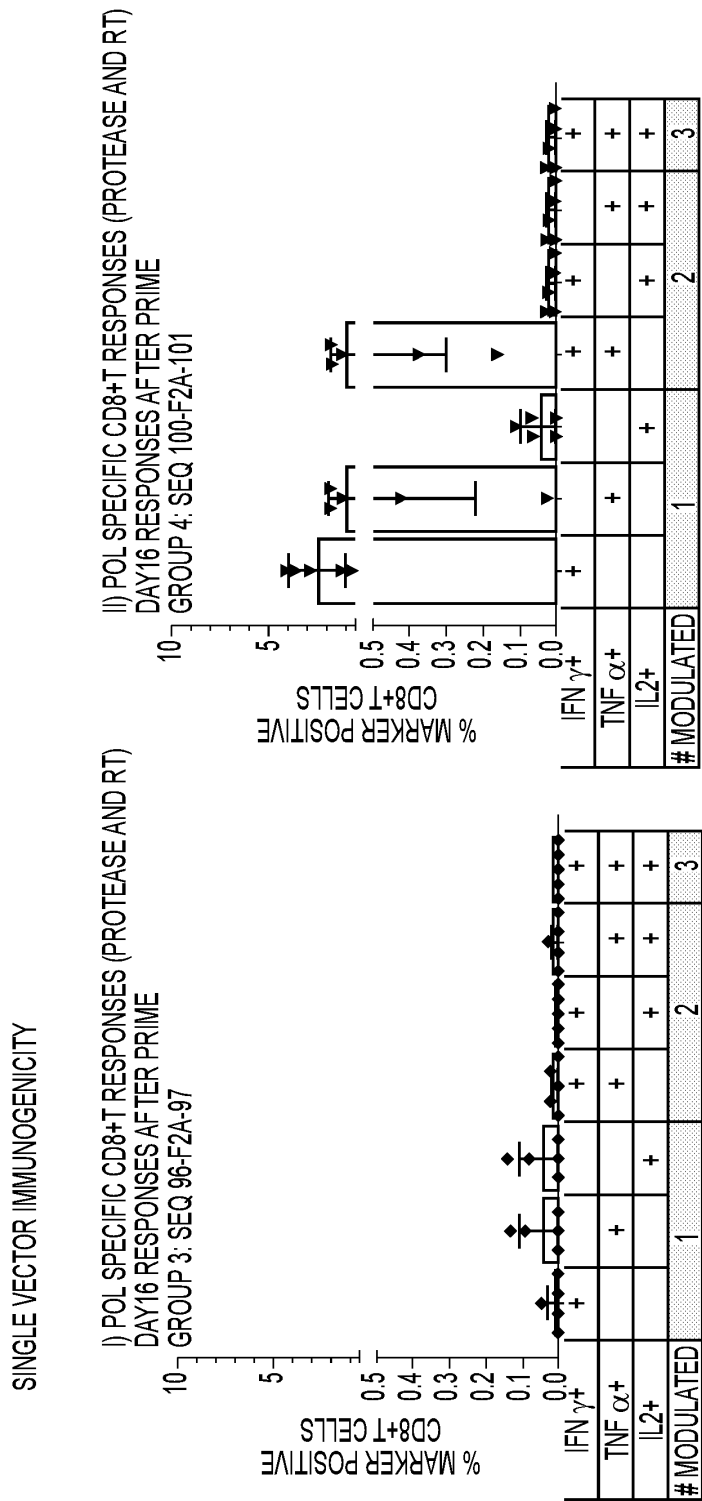


FIG. 36A

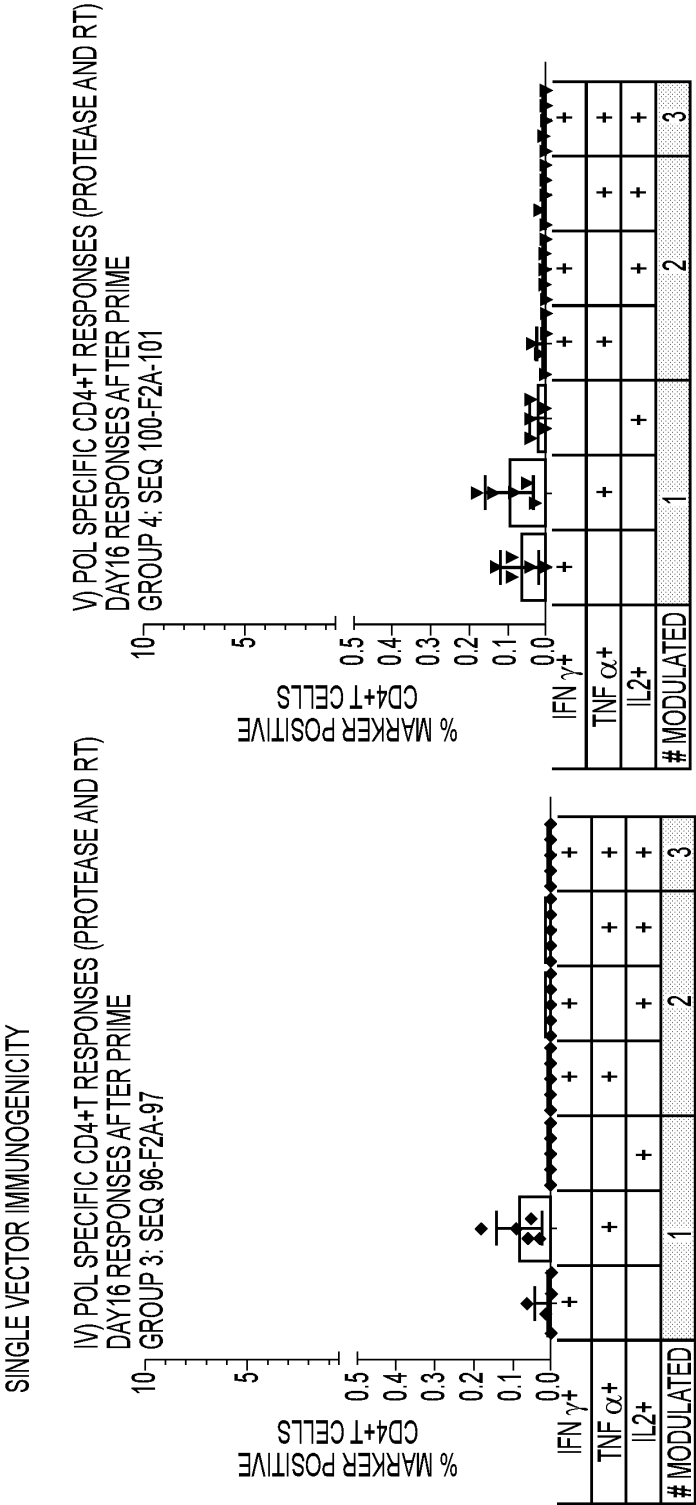


FIG. 36B

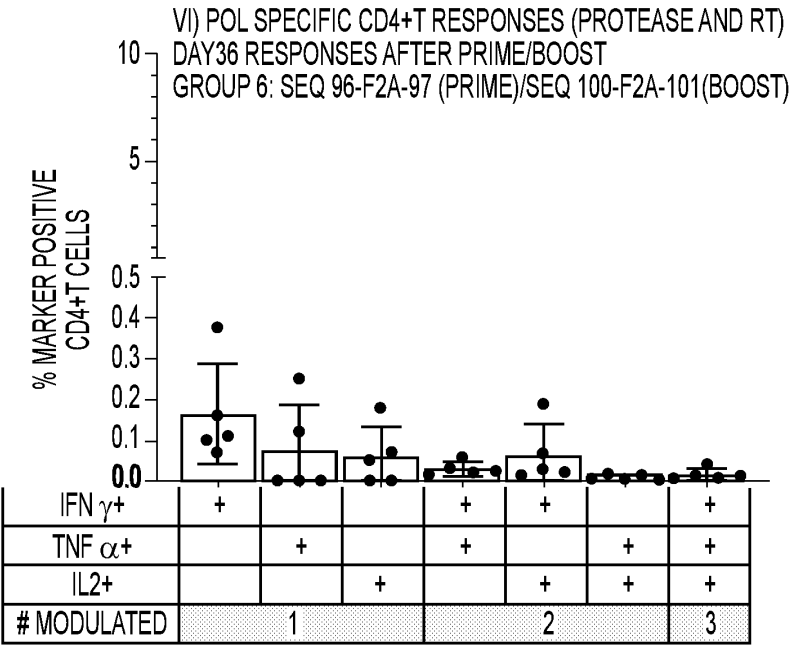
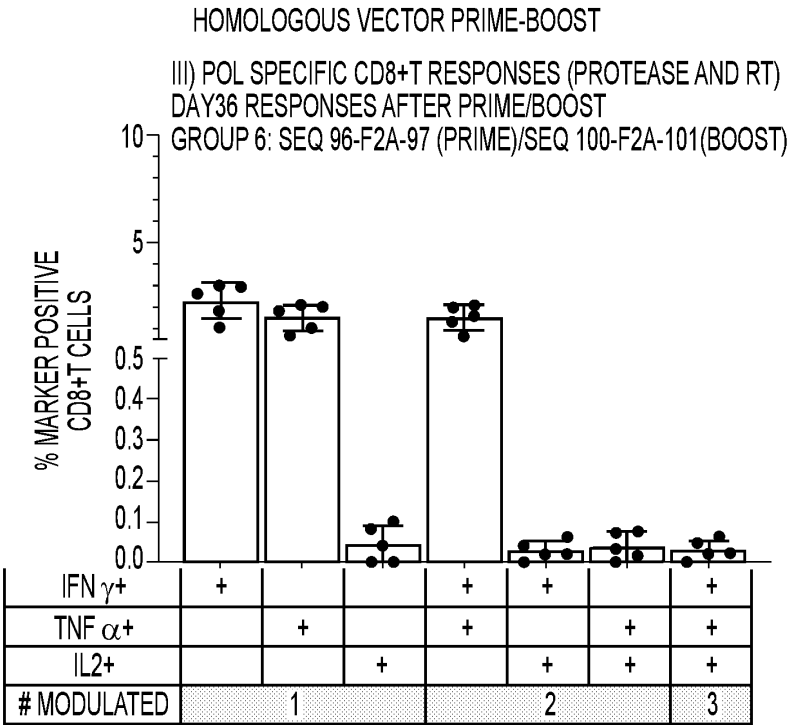


FIG. 36C

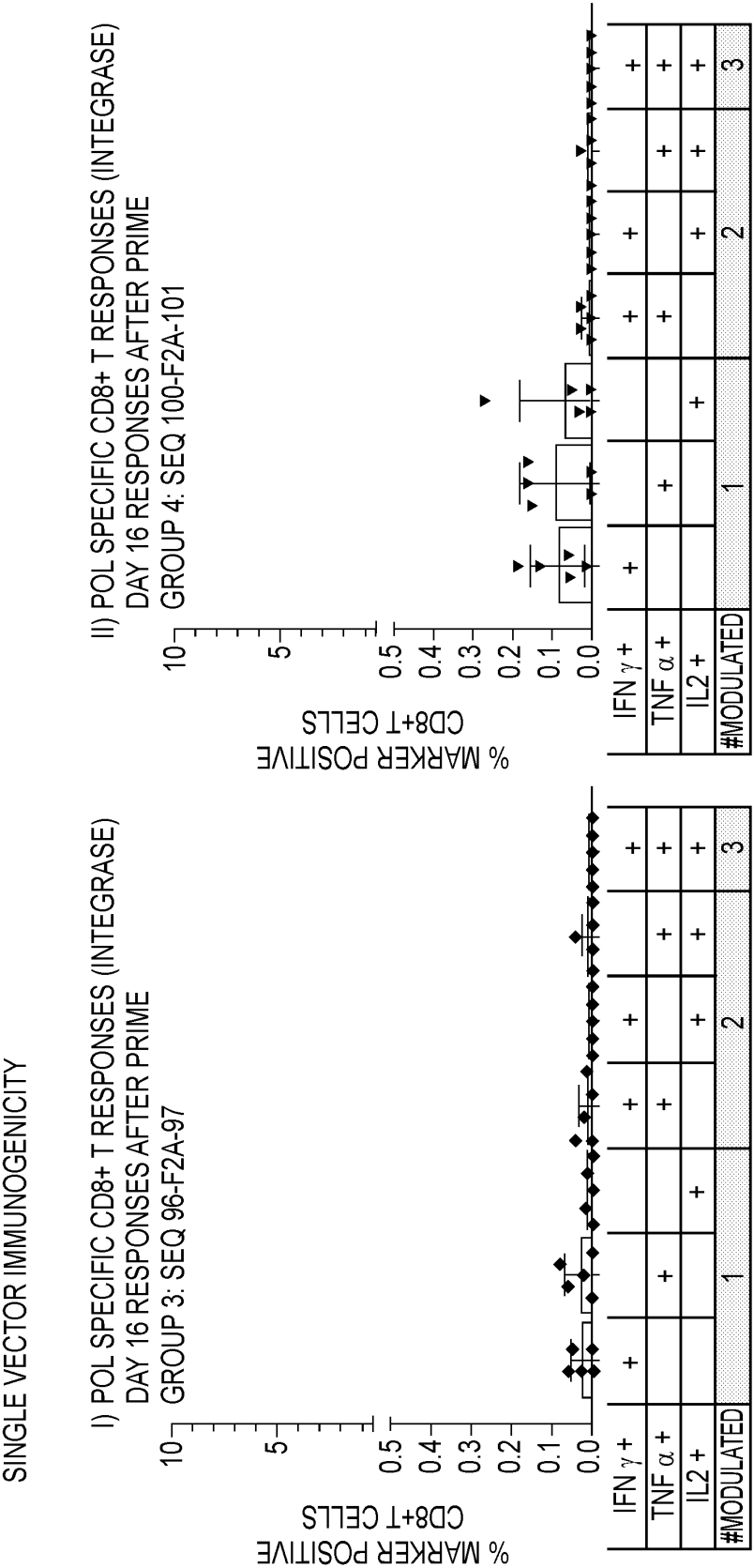


FIG. 37A

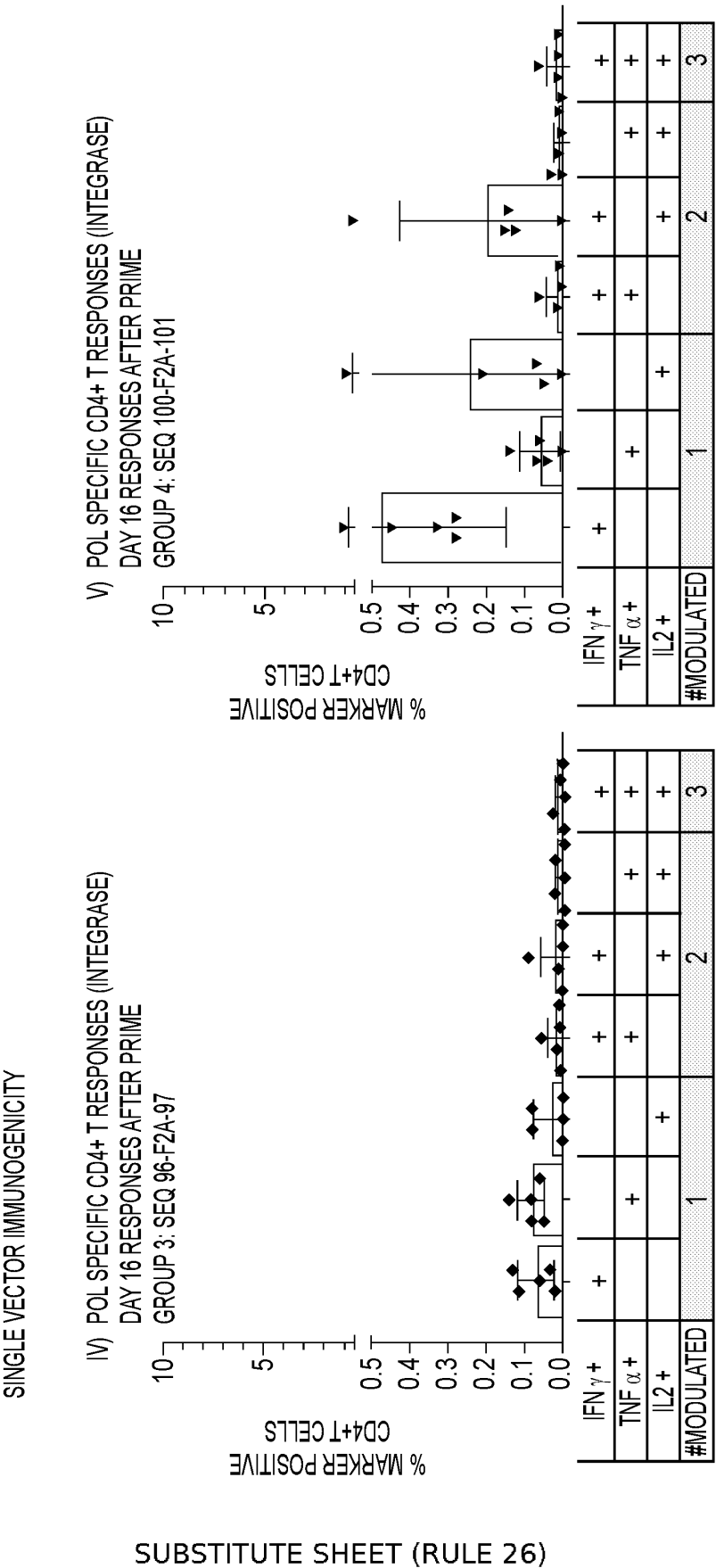


FIG. 37B

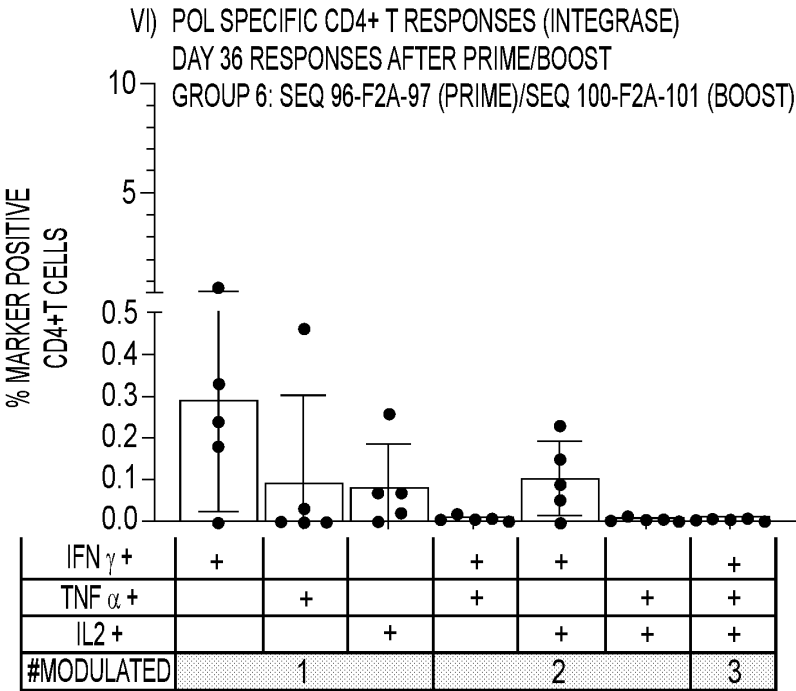
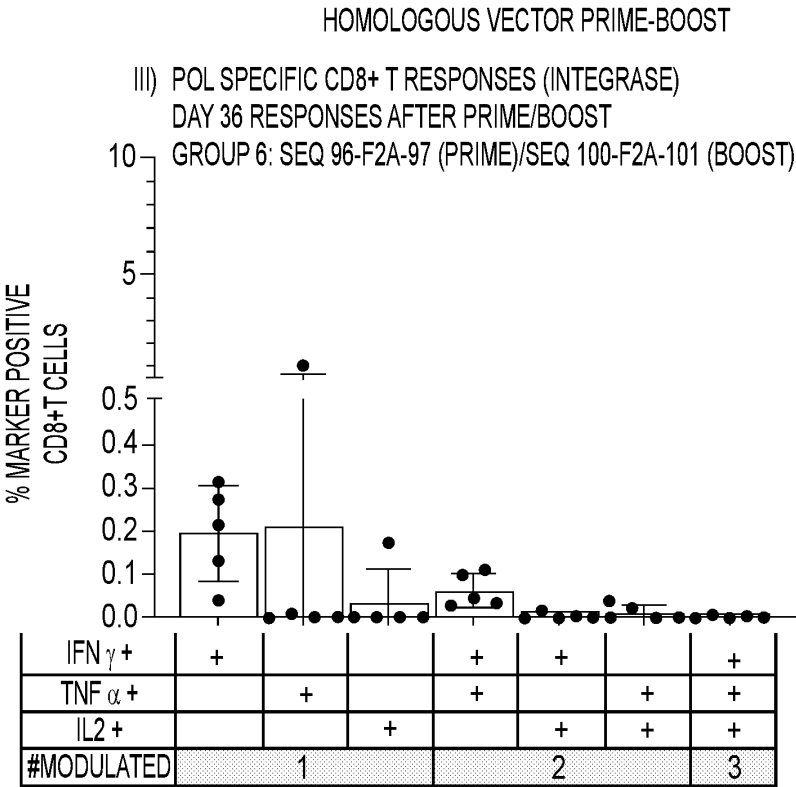


FIG. 37C

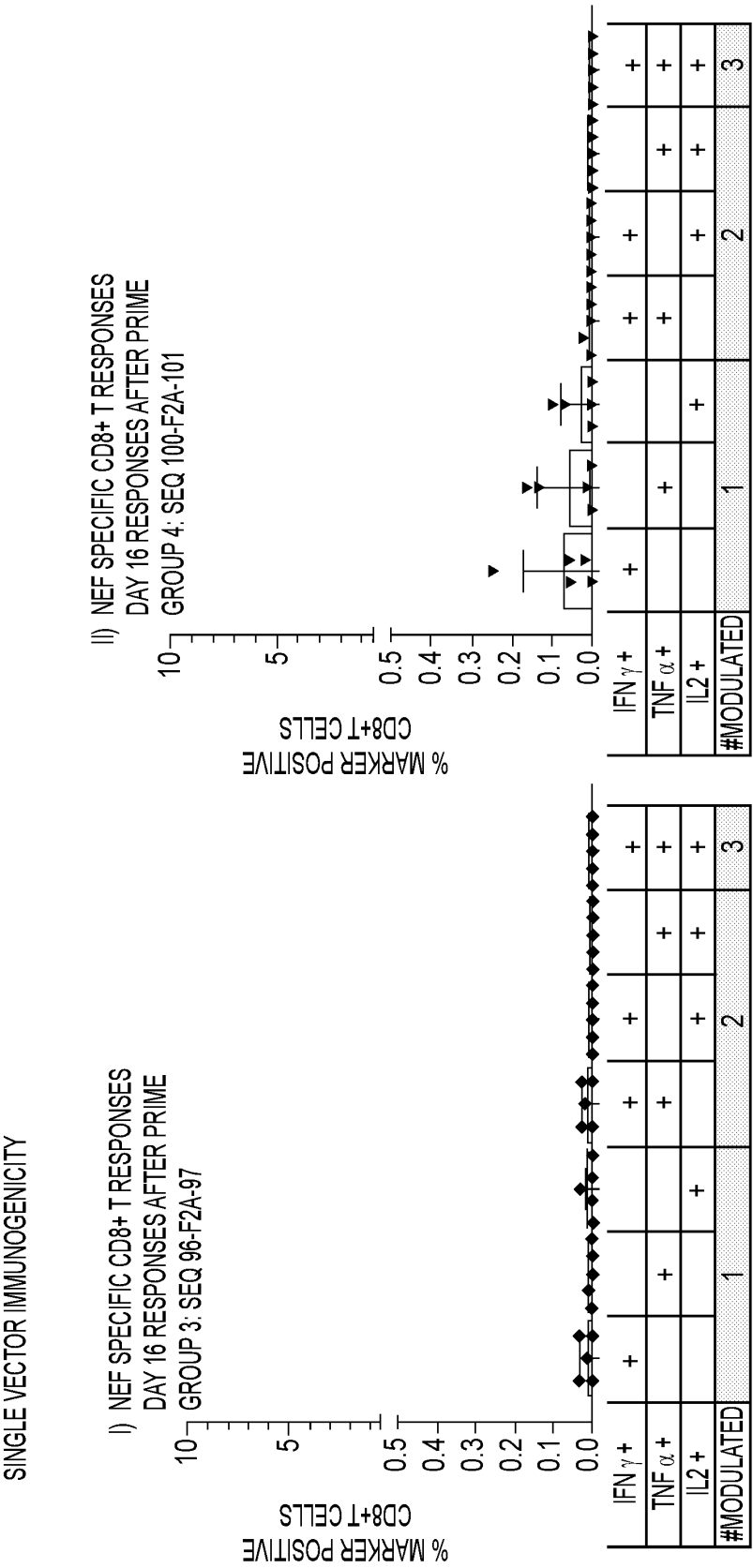


FIG. 38A

SINGLE VECTOR IMMUNOGENICITY

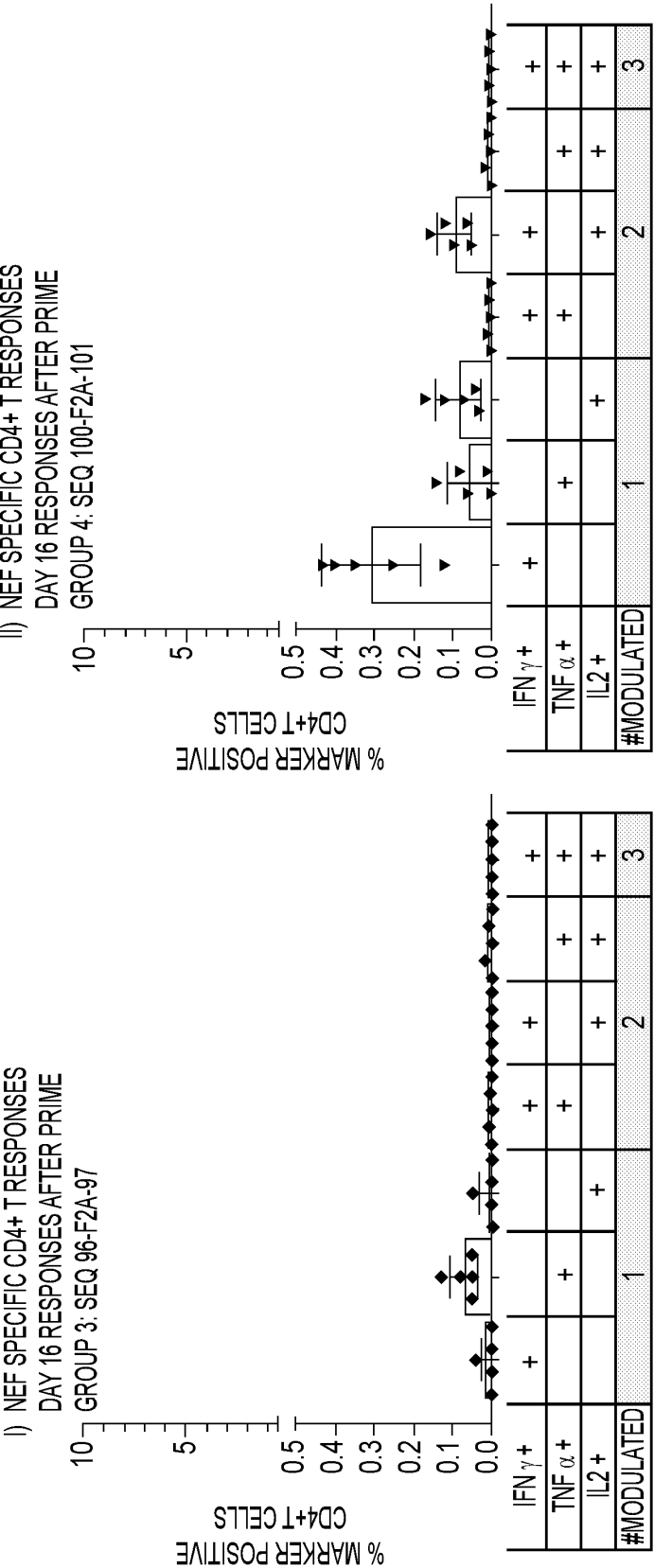


FIG. 38B

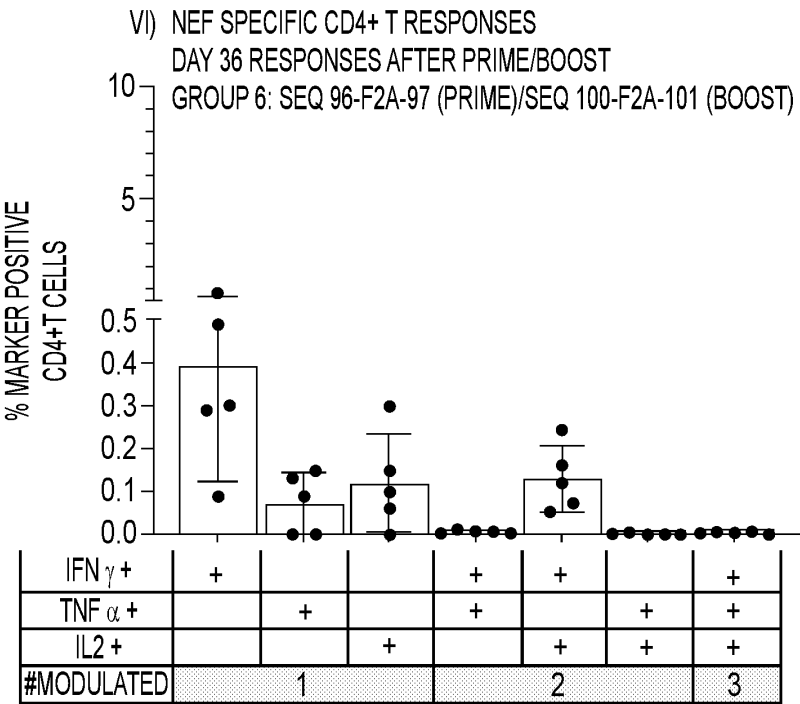
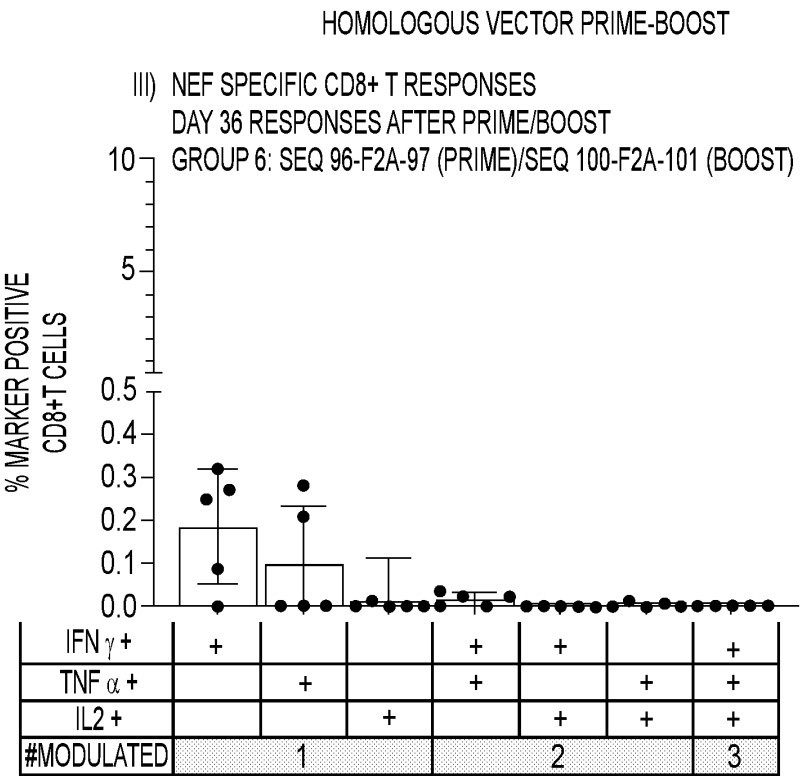


FIG. 38C
SUBSTITUTE SHEET (RULE 26)

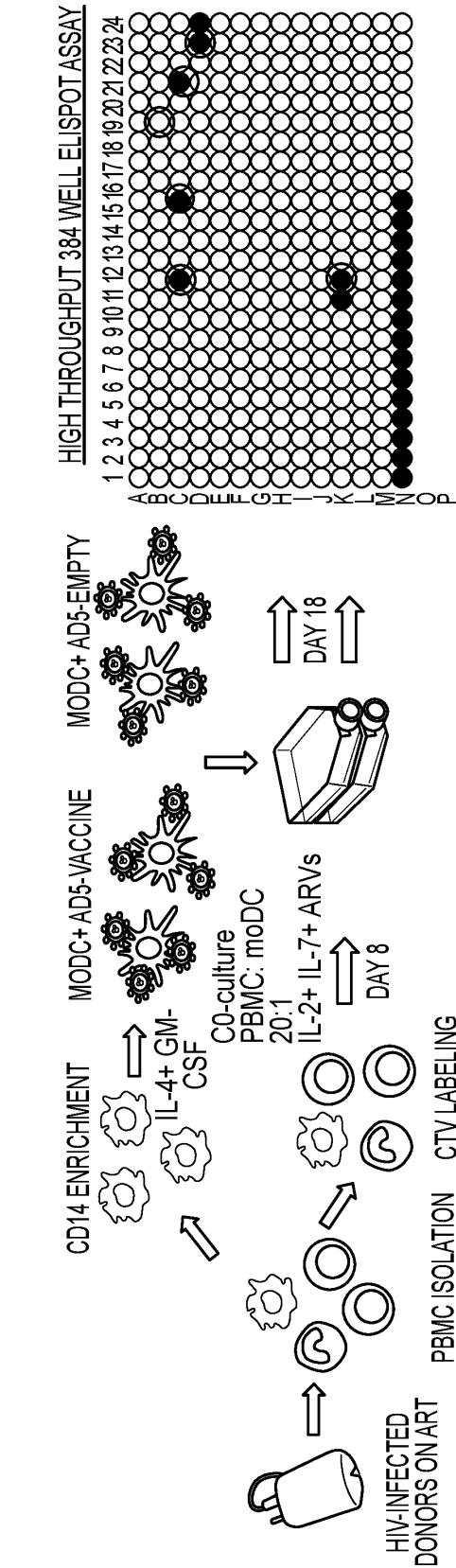


FIG. 39

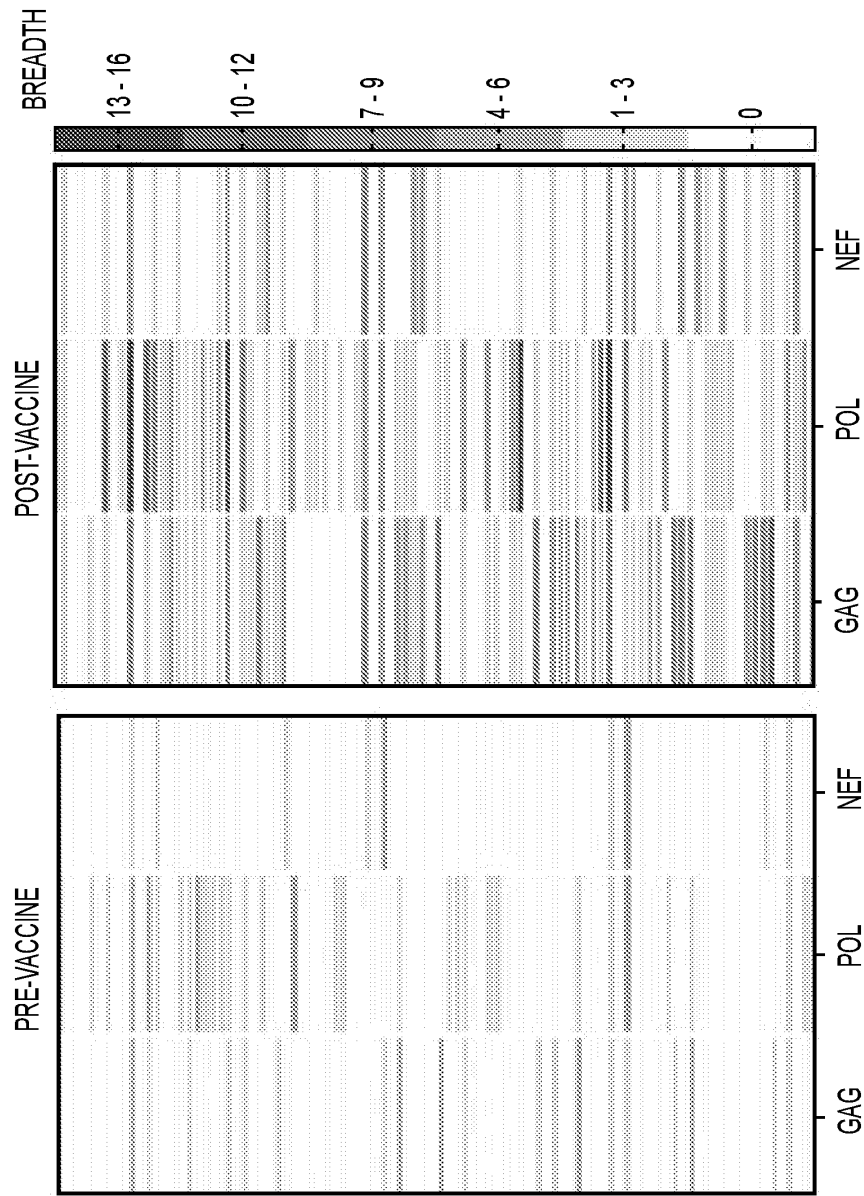


FIG. 40

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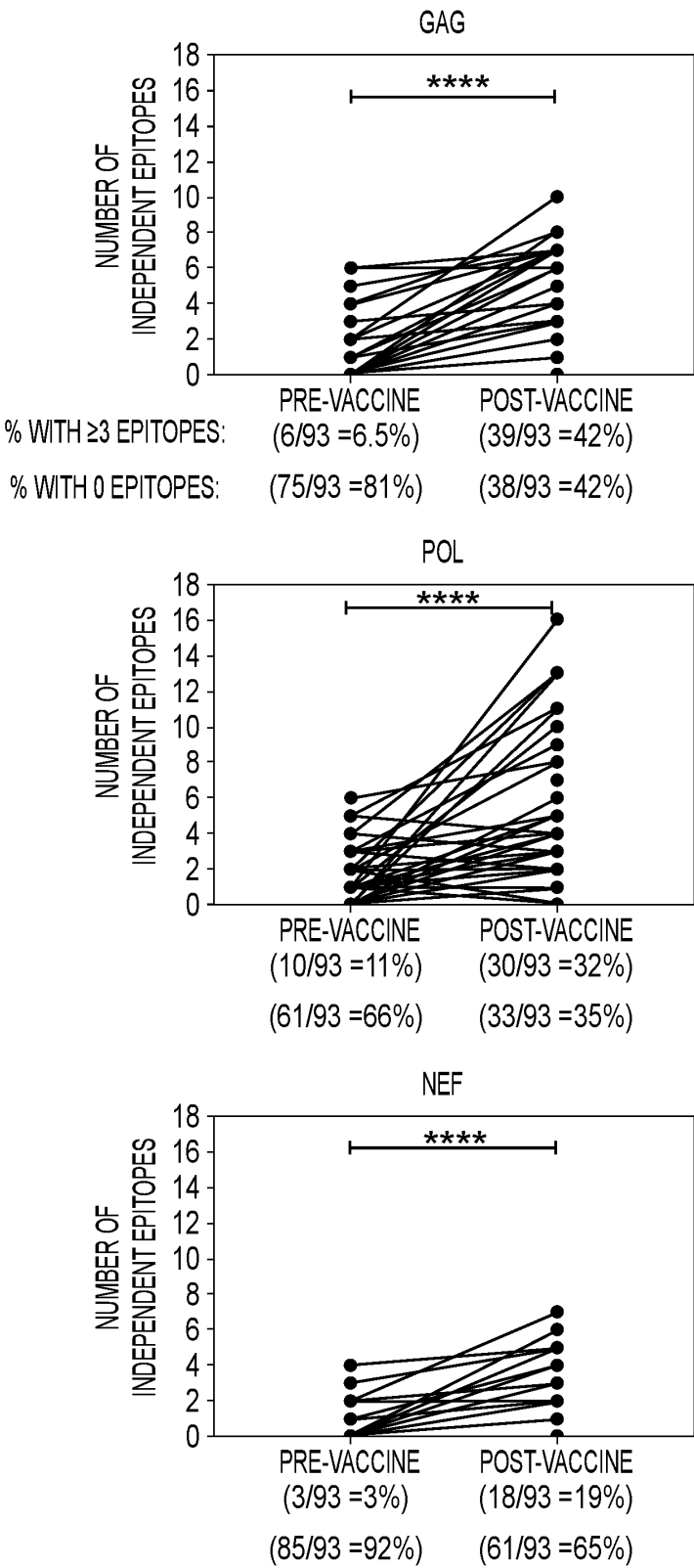


FIG. 41

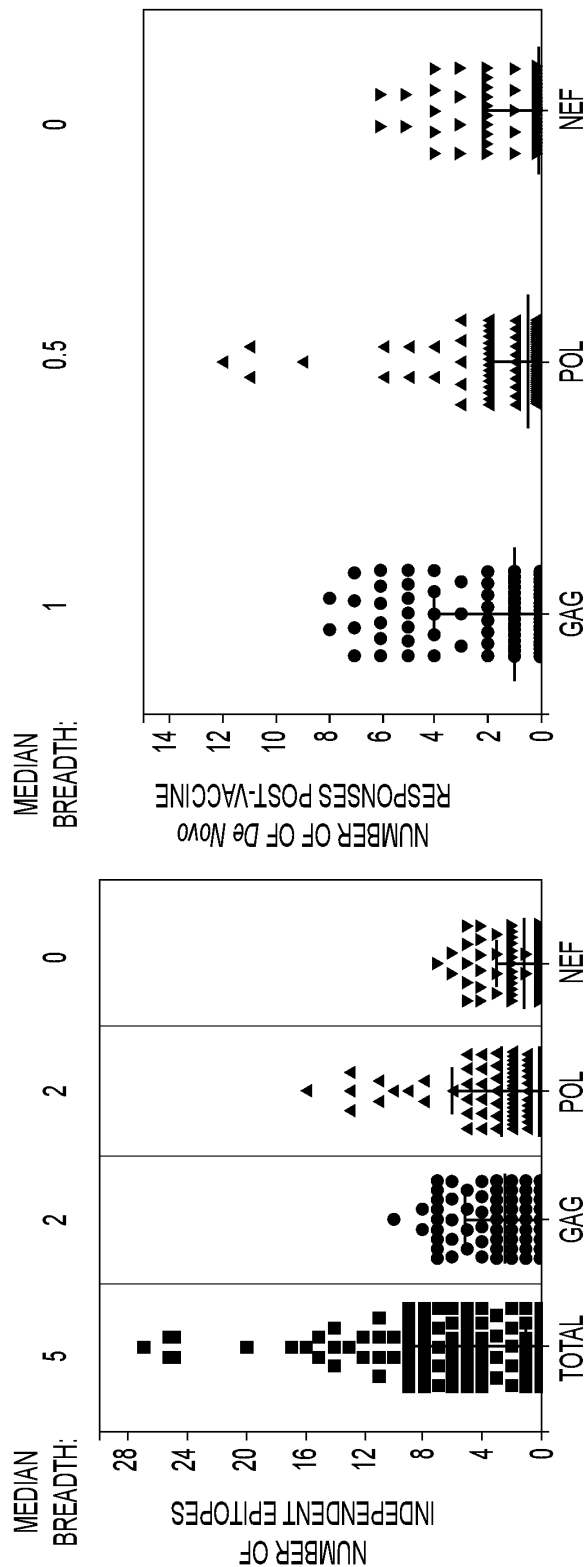


FIG. 42

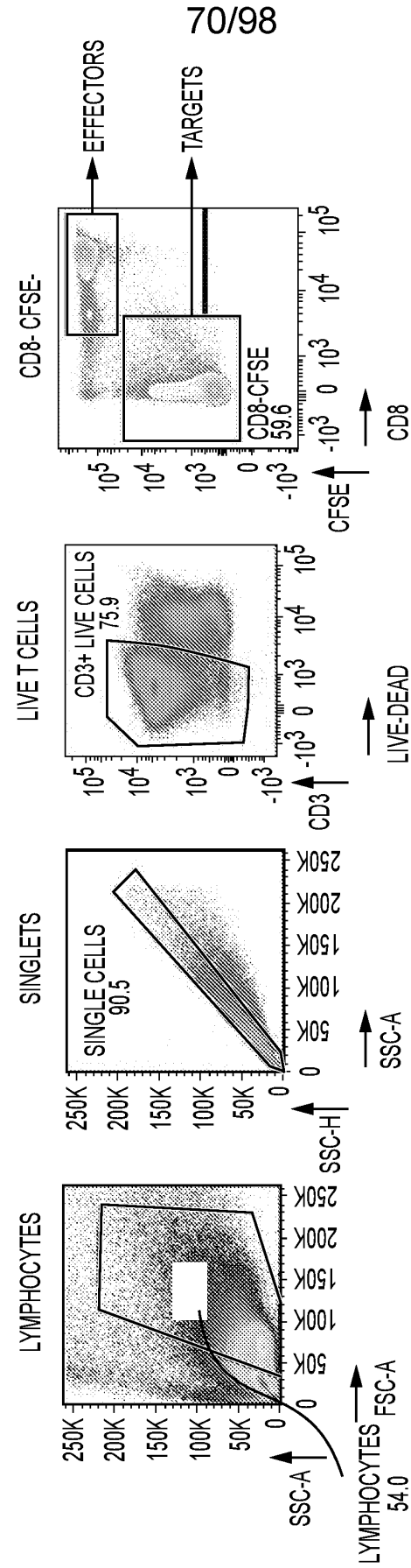


FIG. 43A

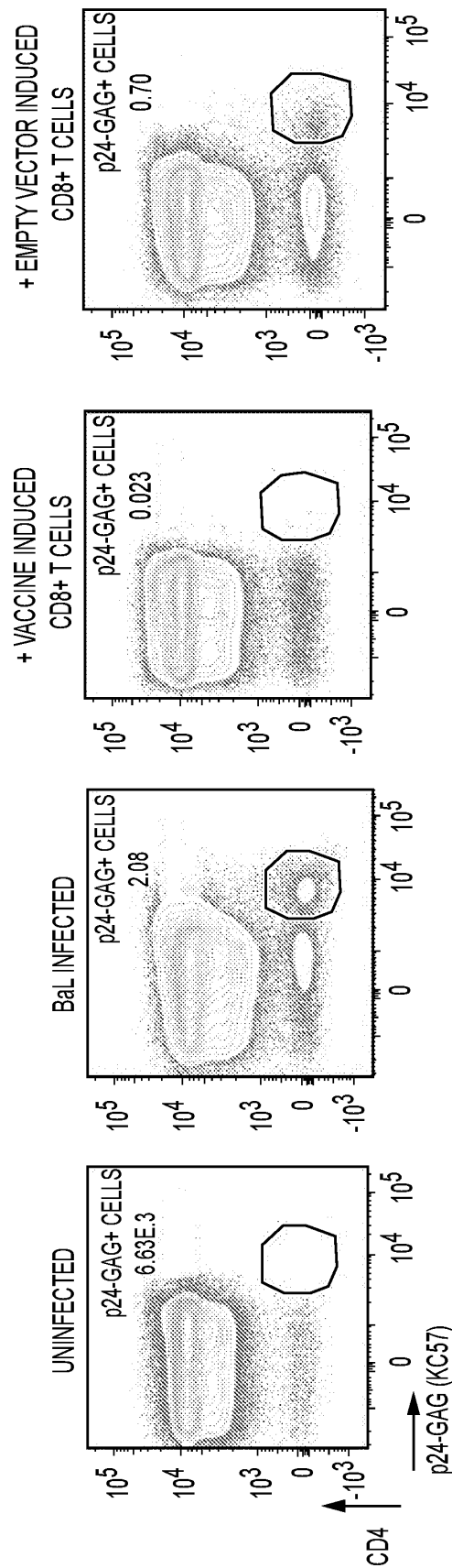


FIG. 43B

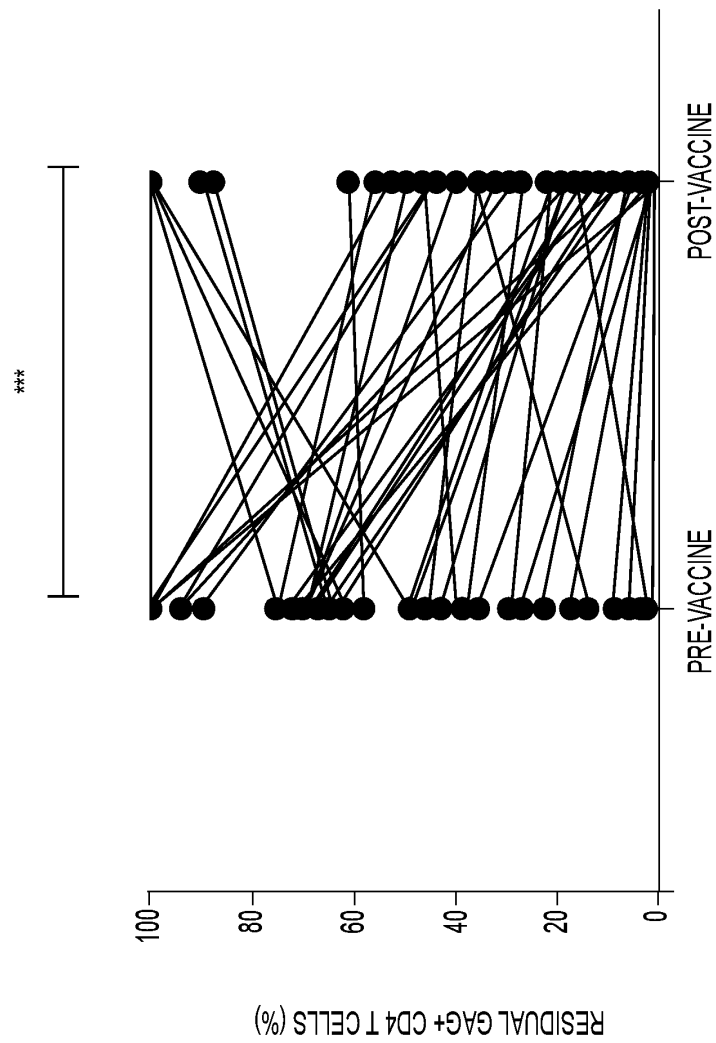
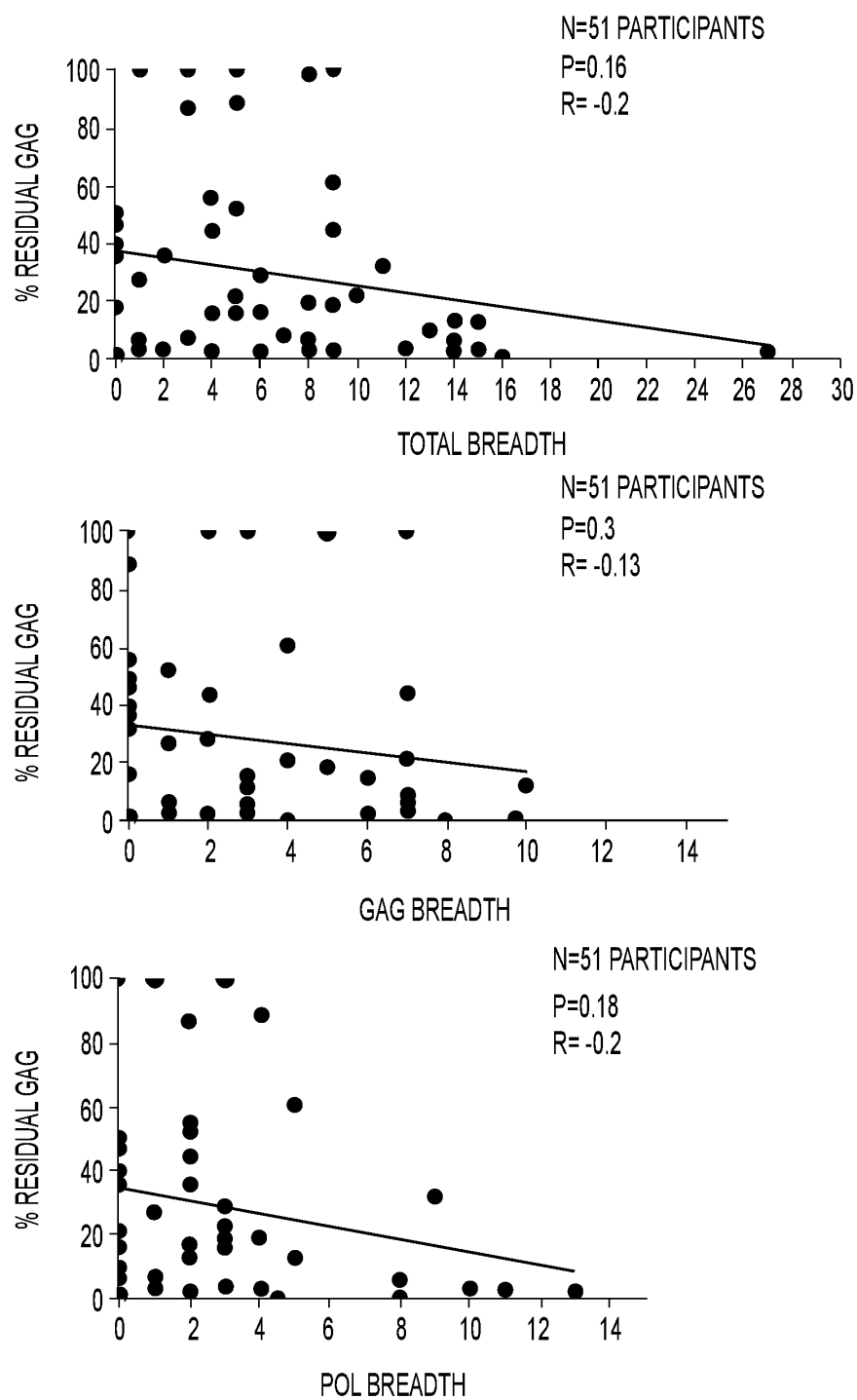
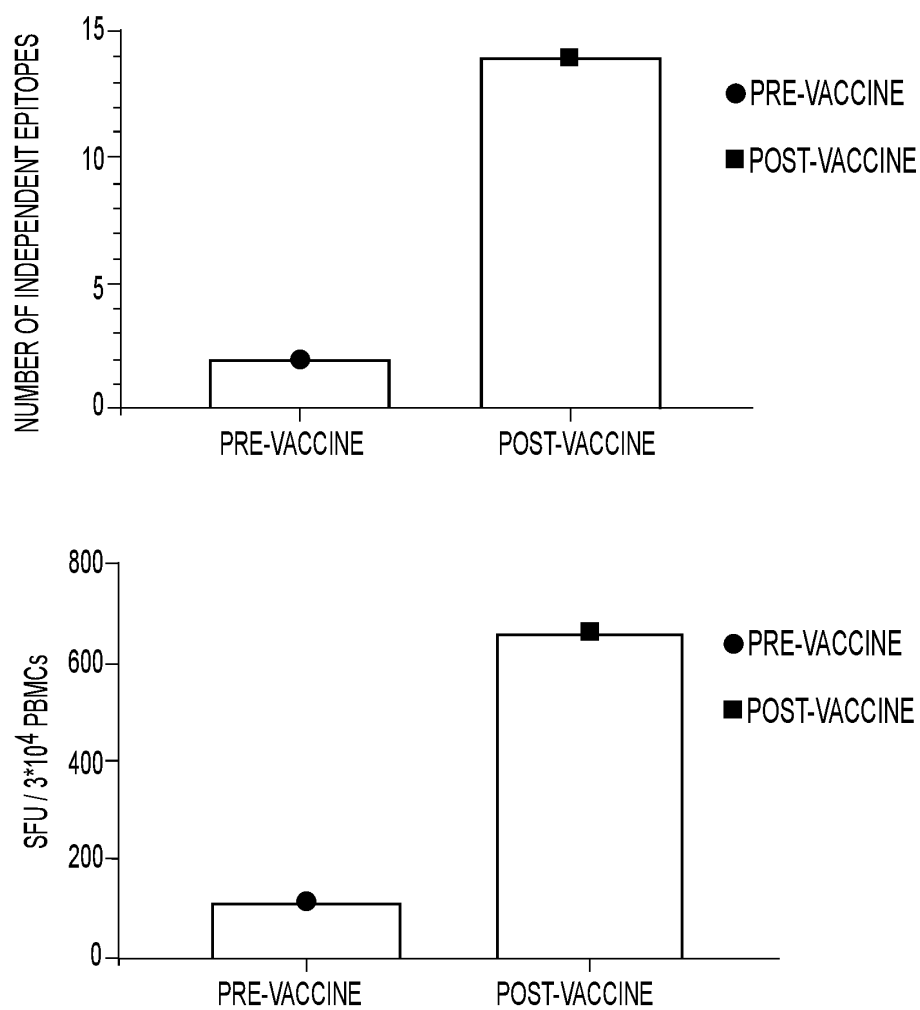


FIG. 44A

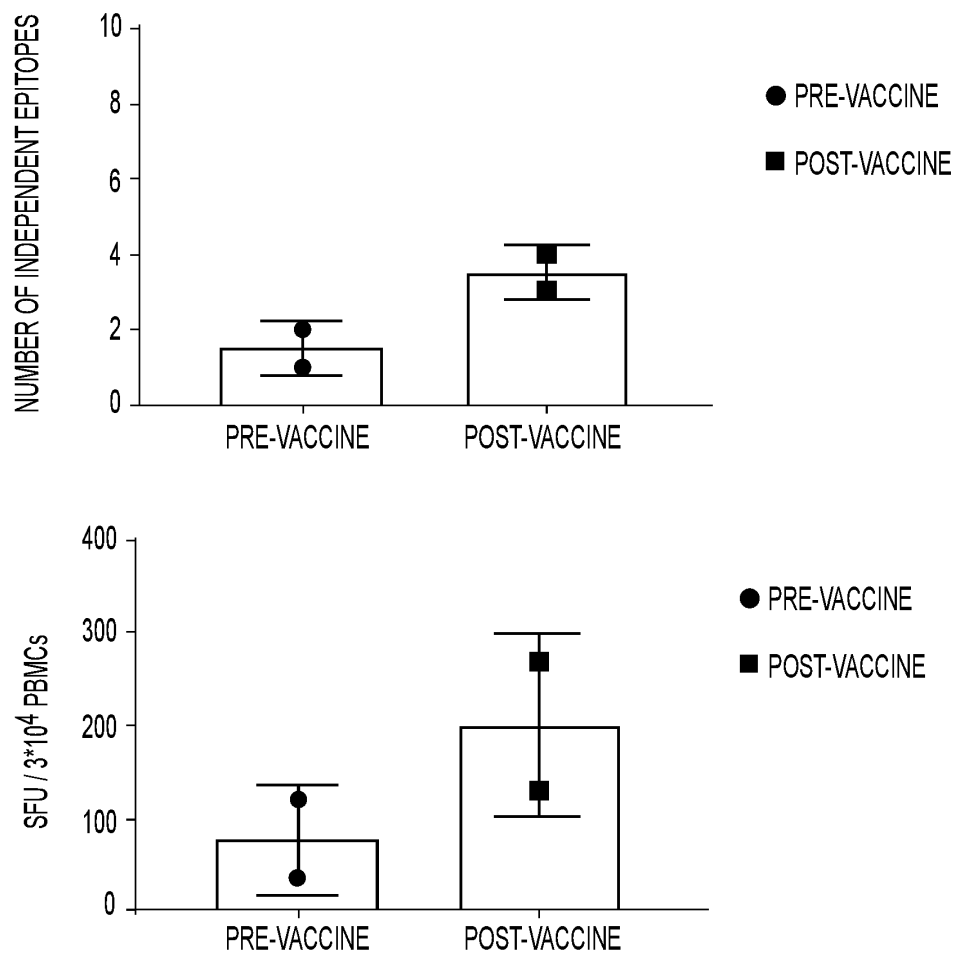
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**FIG. 44B**

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**FIG. 45A**

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**FIG. 45B**

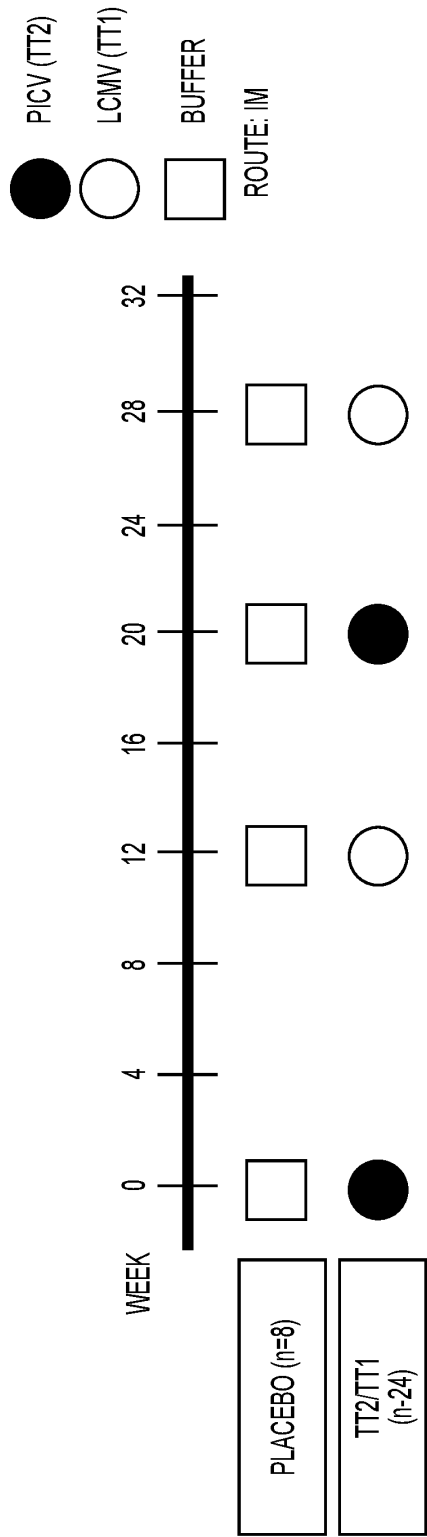


FIG. 46

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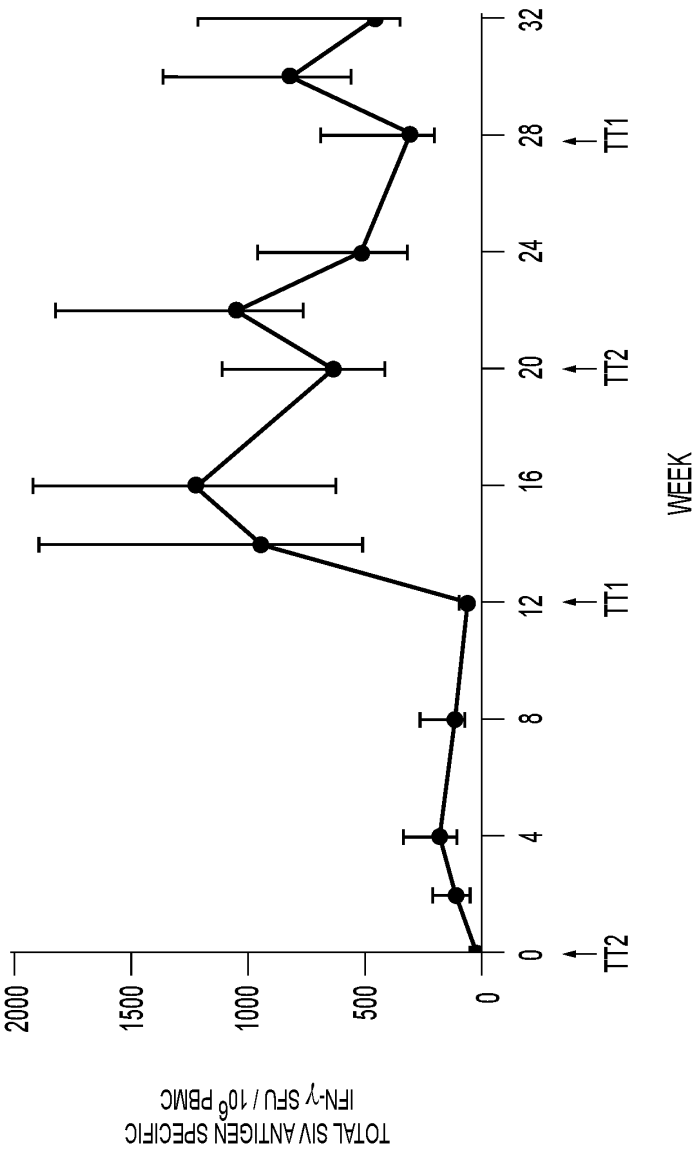


FIG. 47A

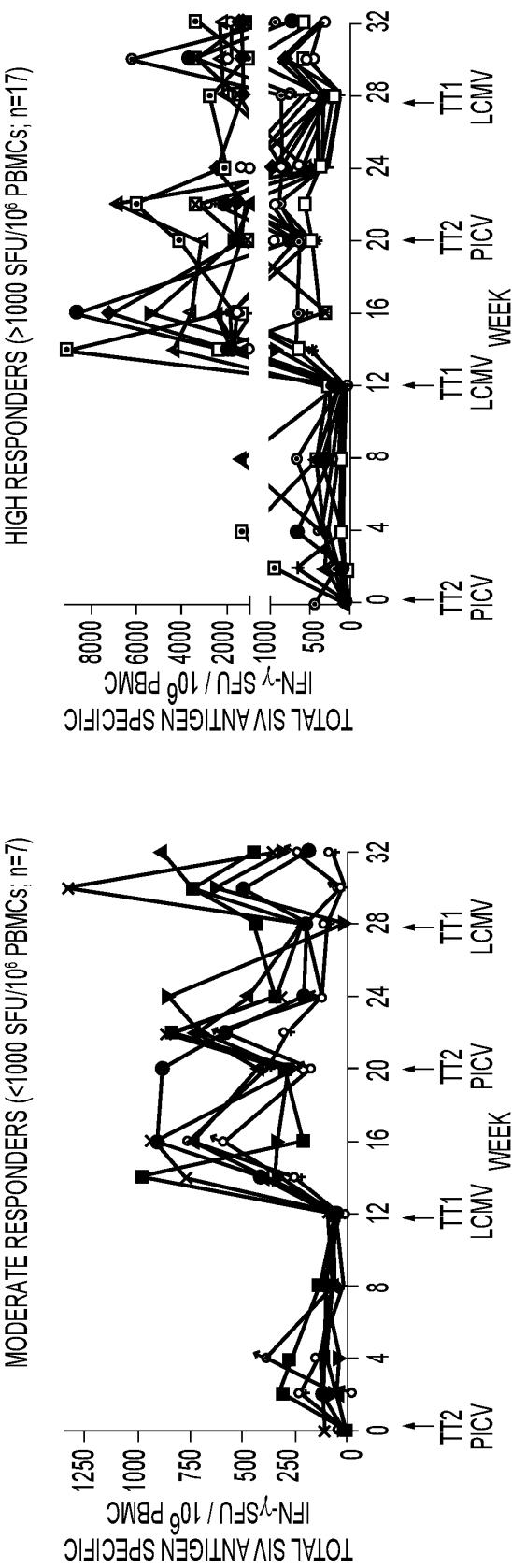


FIG. 47B

FIG. 48B

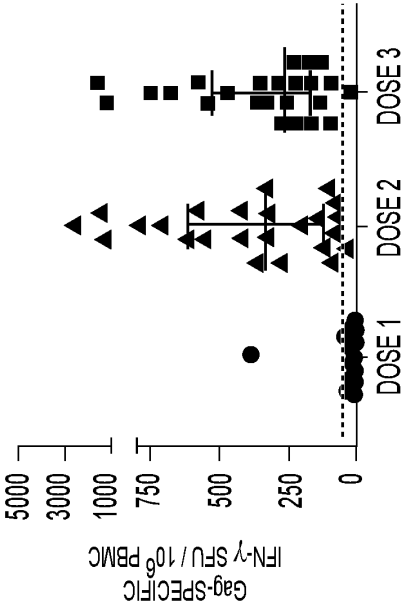


FIG. 48A

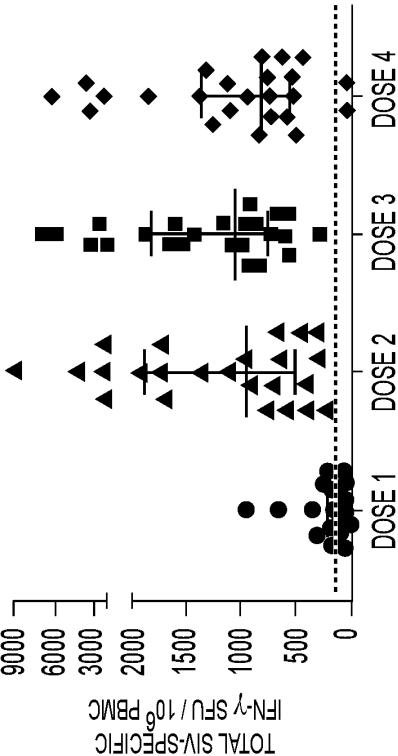


FIG. 48D

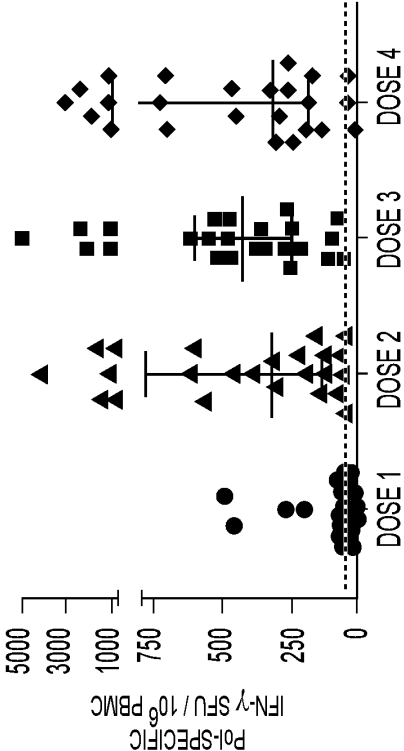


FIG. 48C

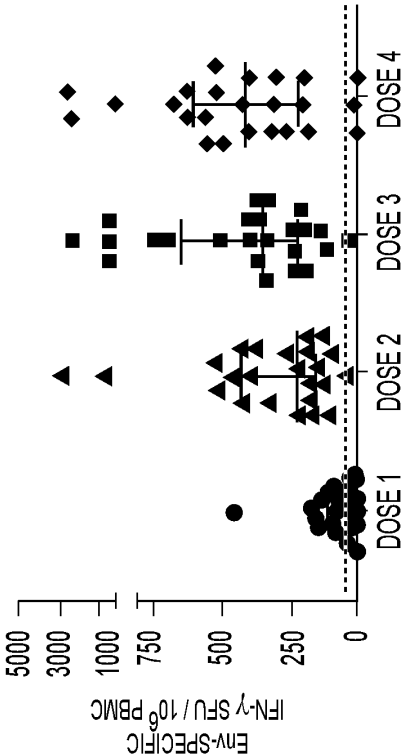


FIG. 48

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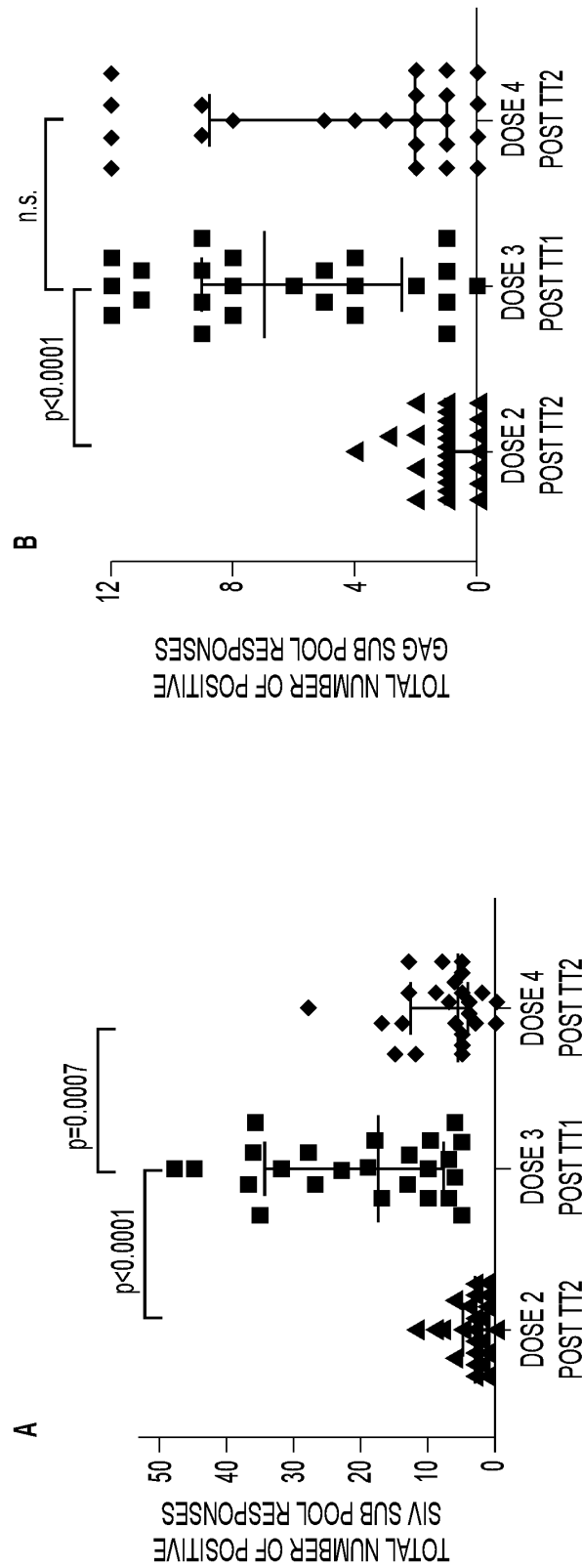


FIG. 49A-B

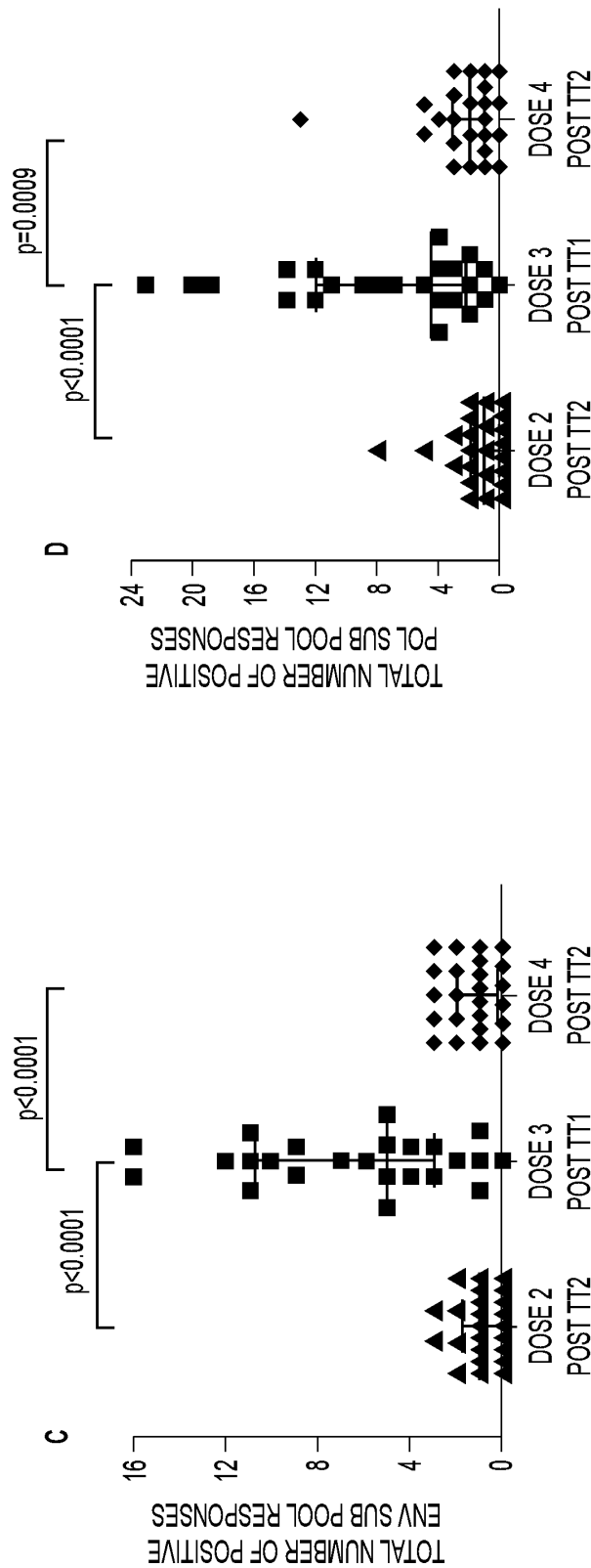


FIG. 49C-D

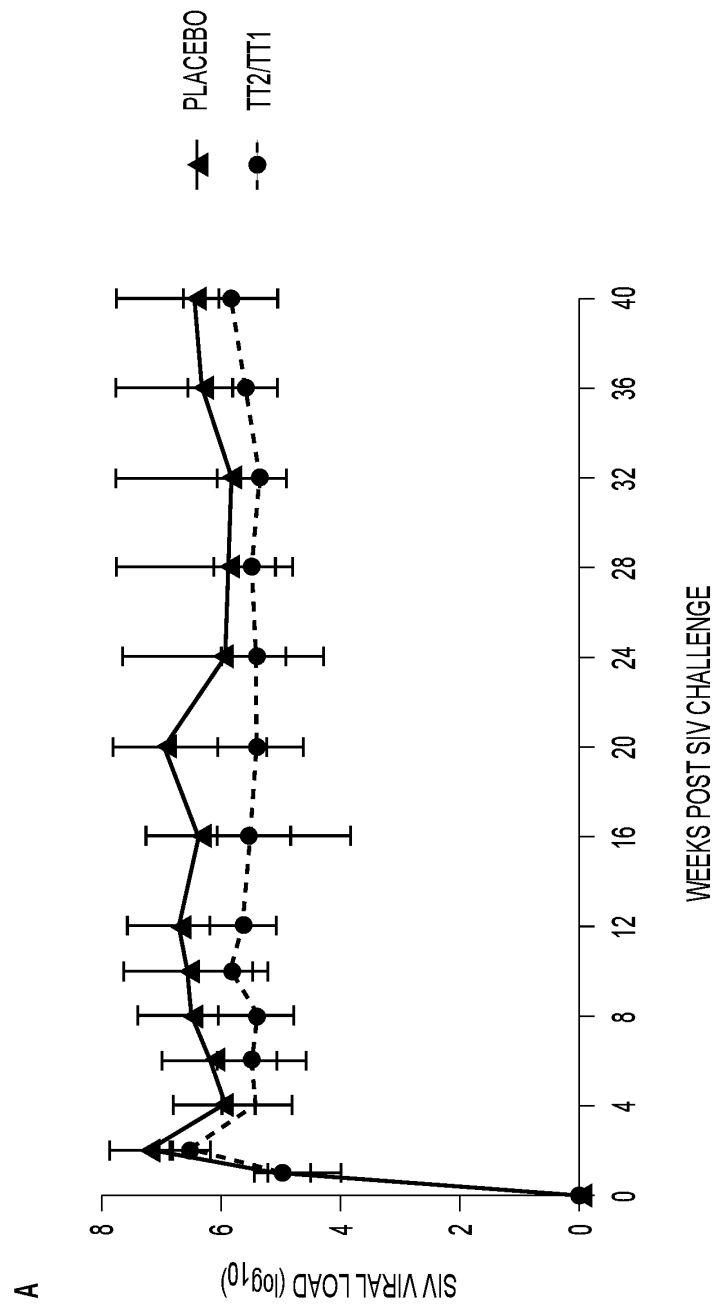


FIG. 50A

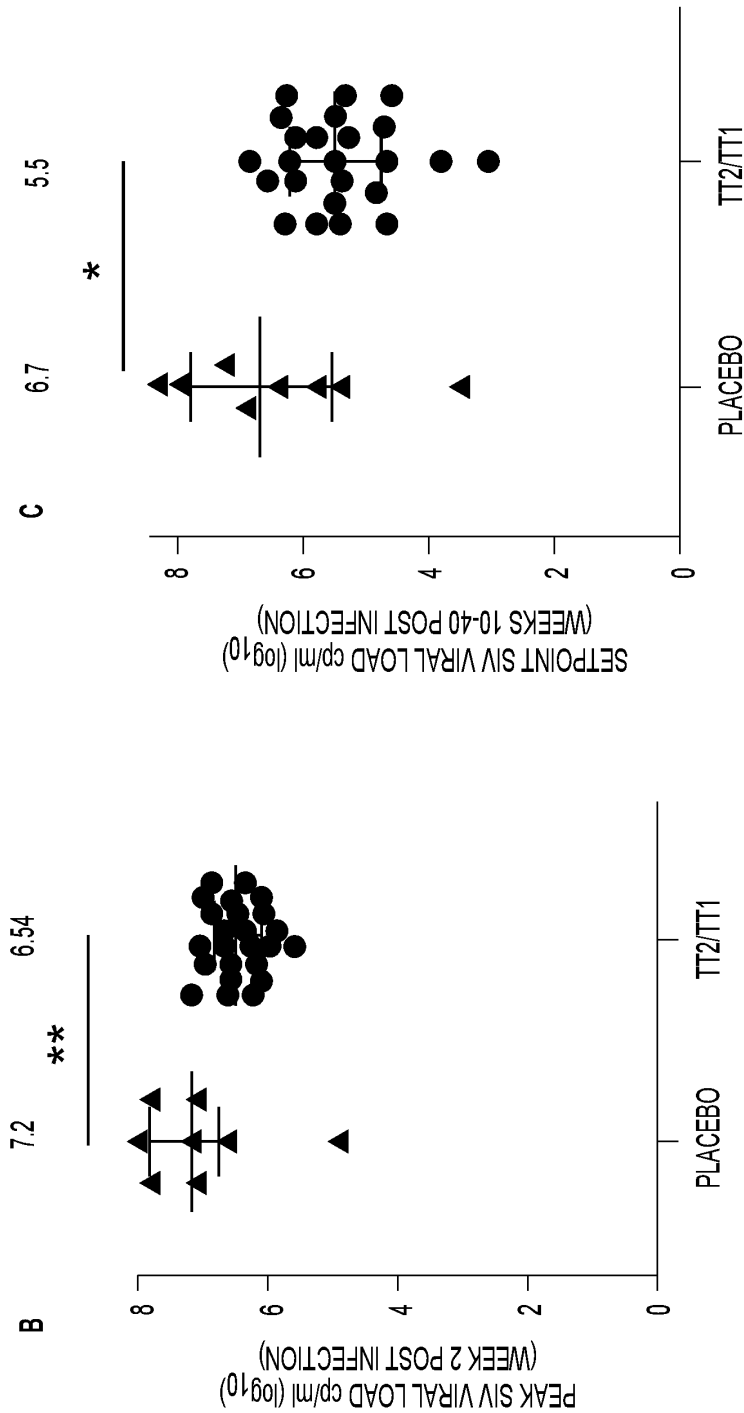


FIG. 50B-C

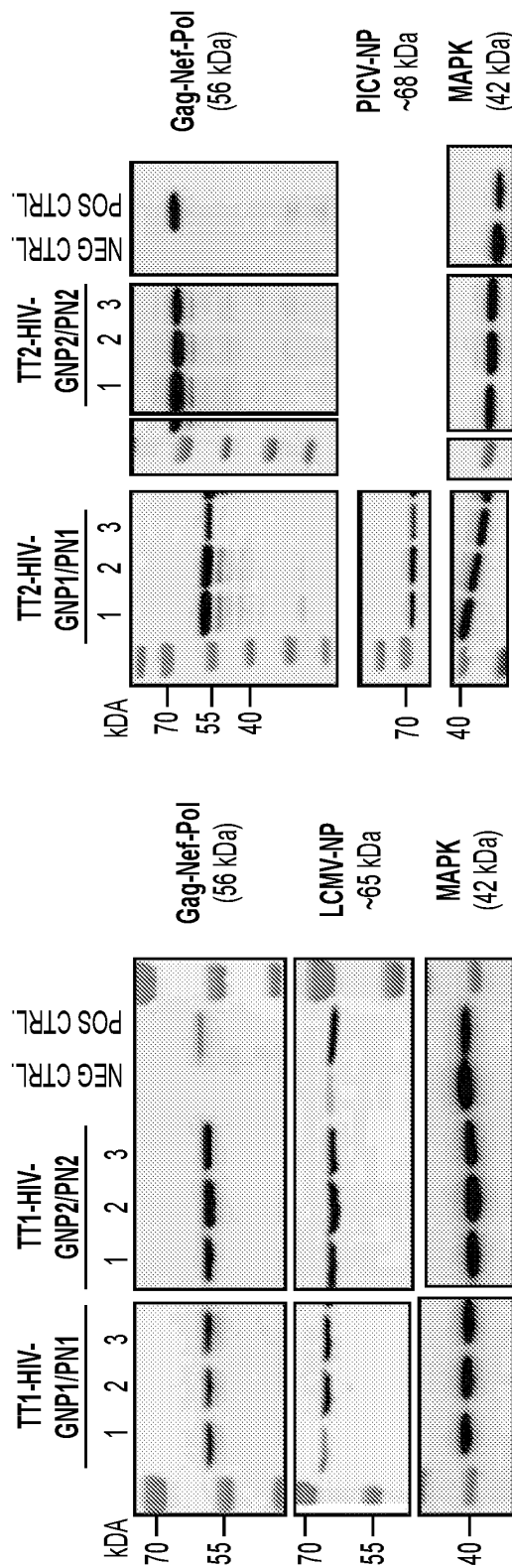


FIG. 51

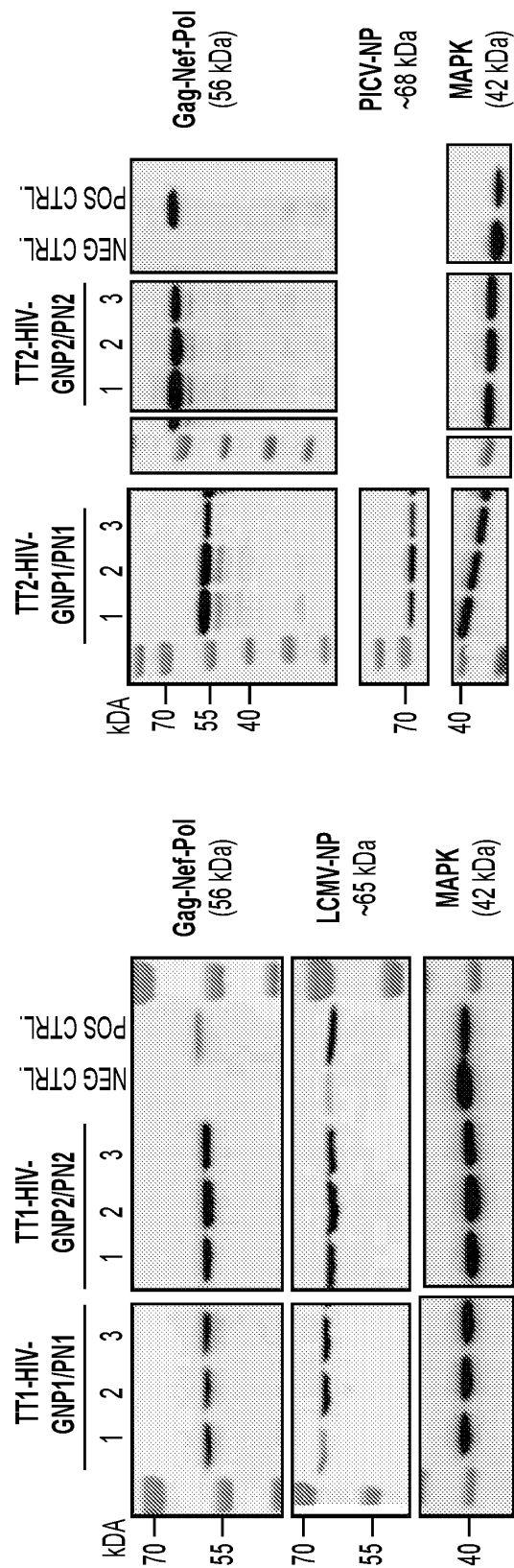


FIG. 52

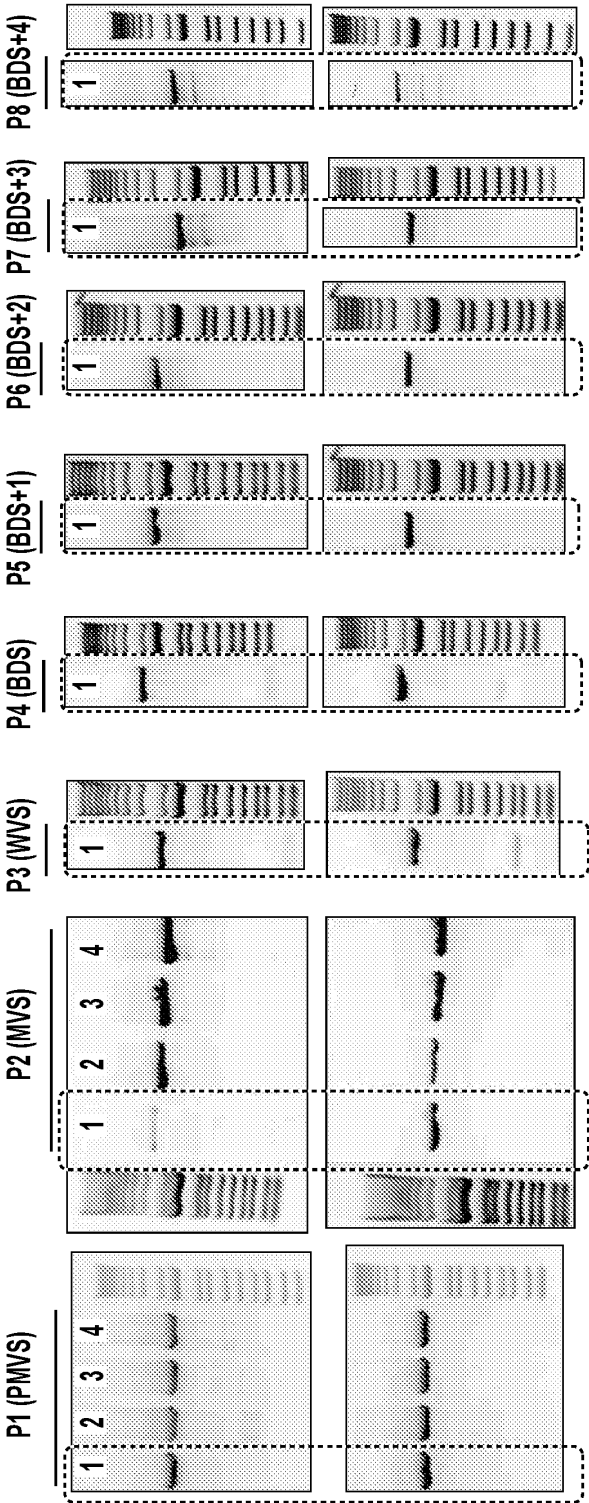


FIG. 53

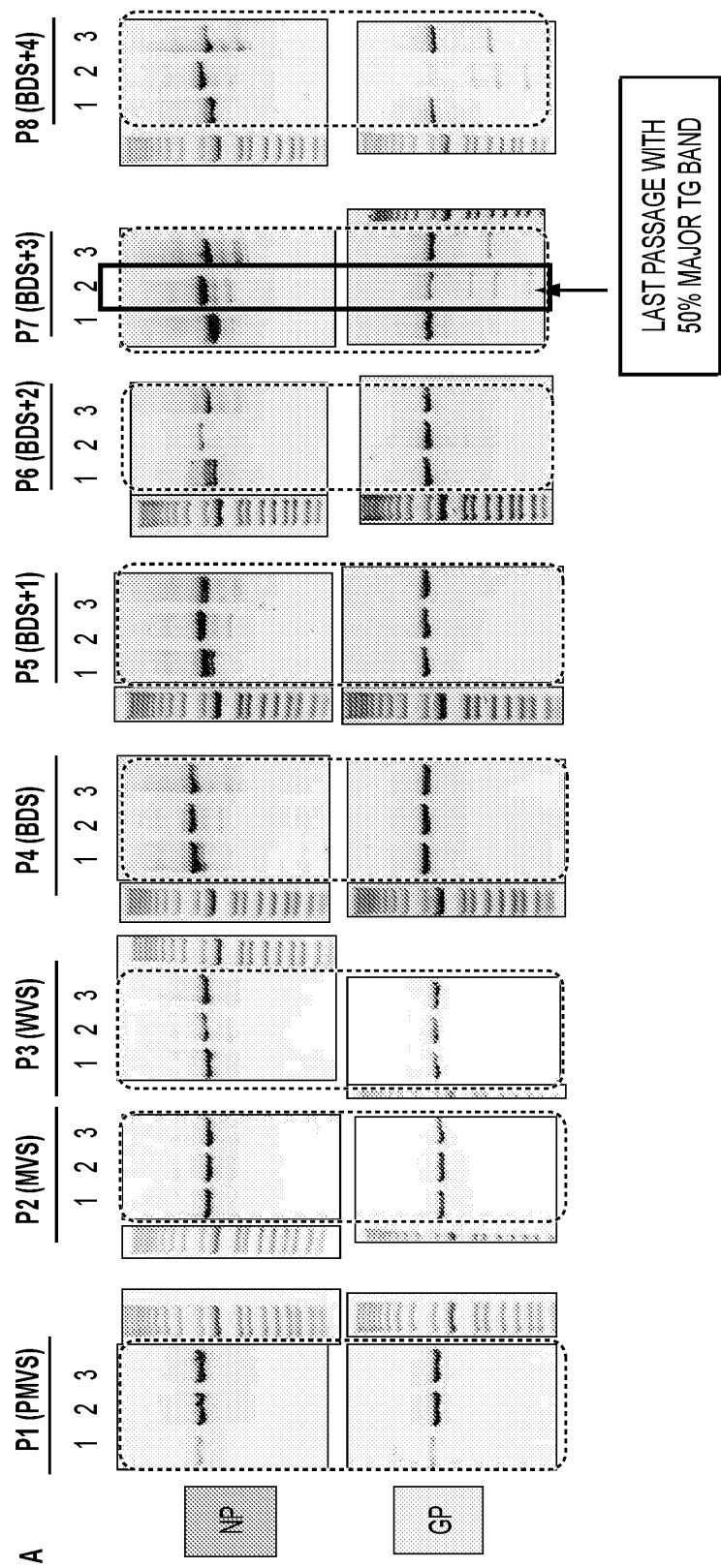


FIG. 54

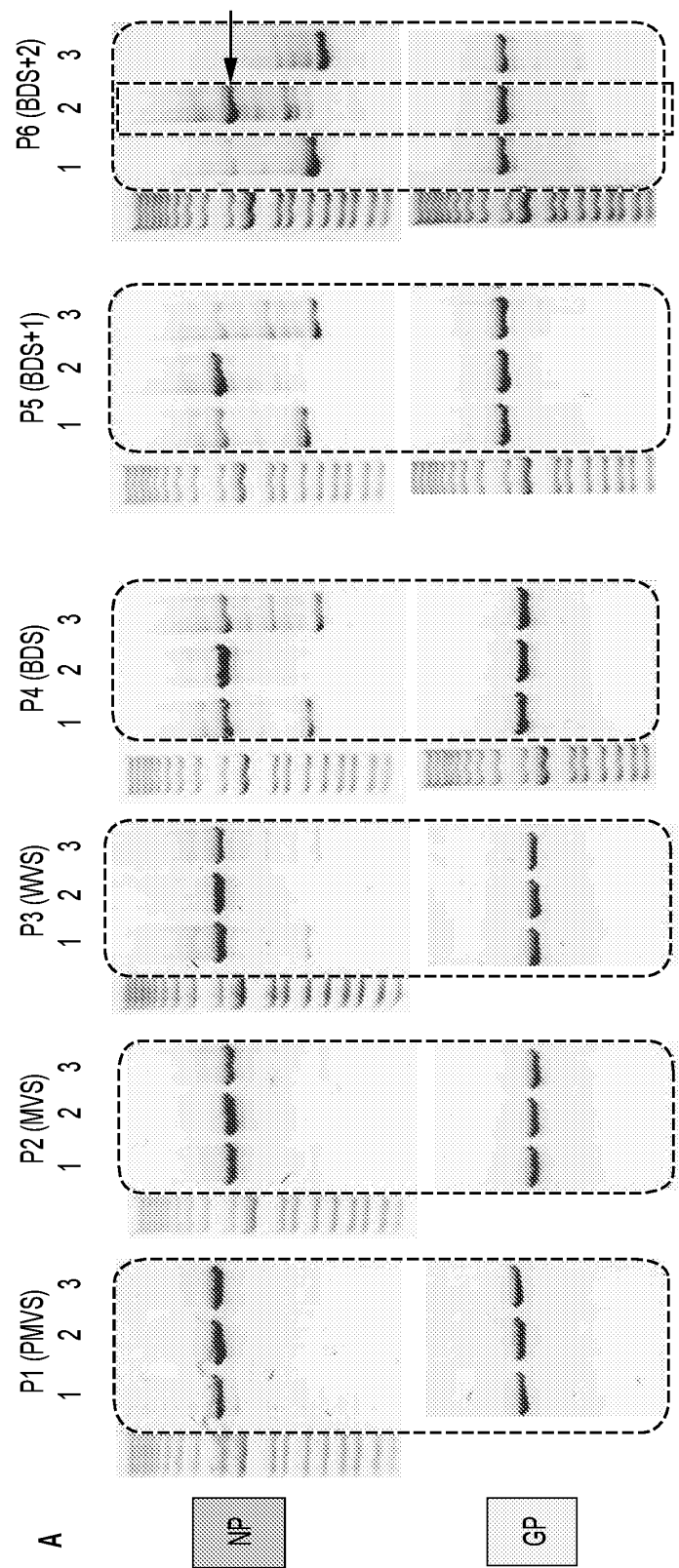


FIG. 55

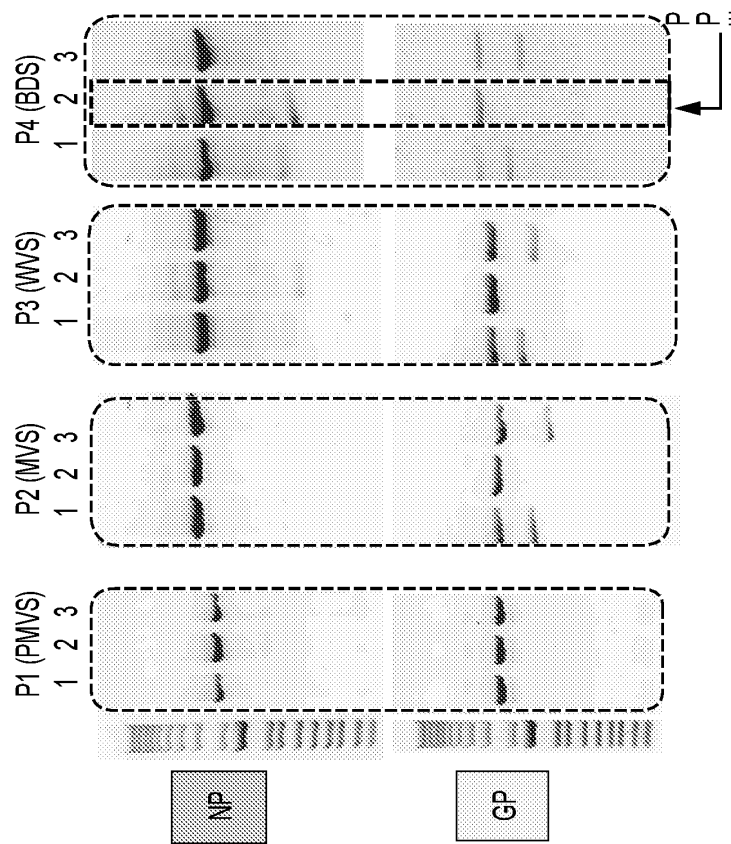
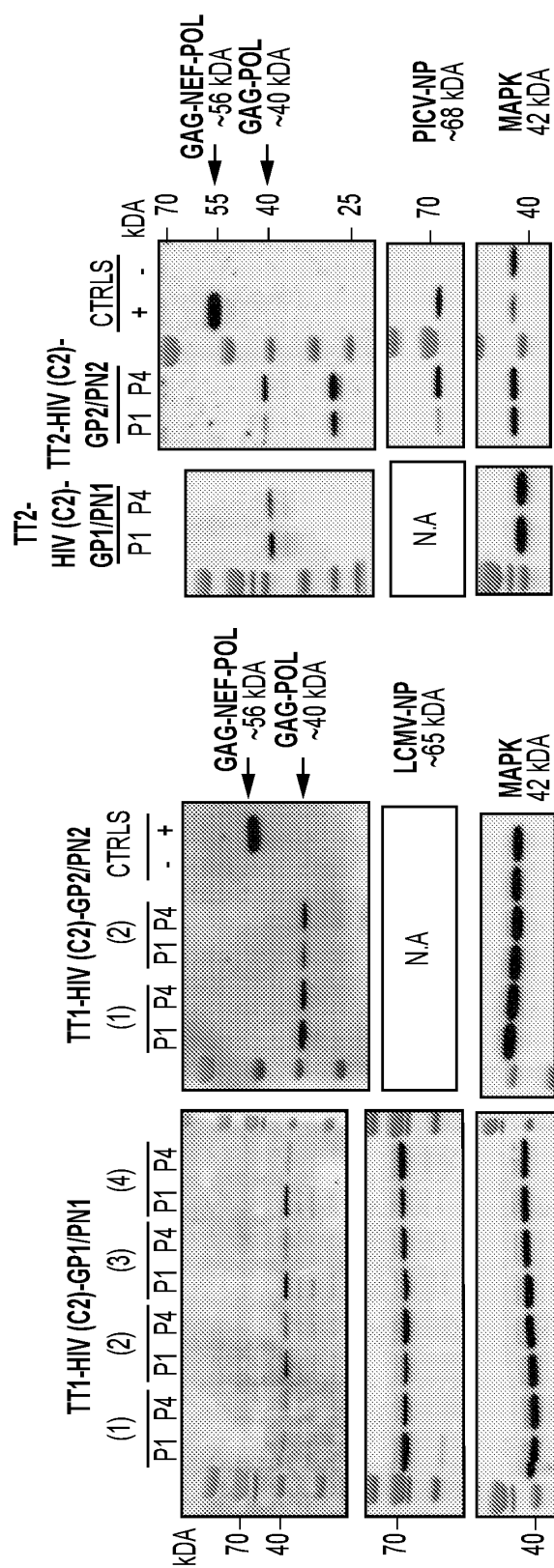


FIG. 56



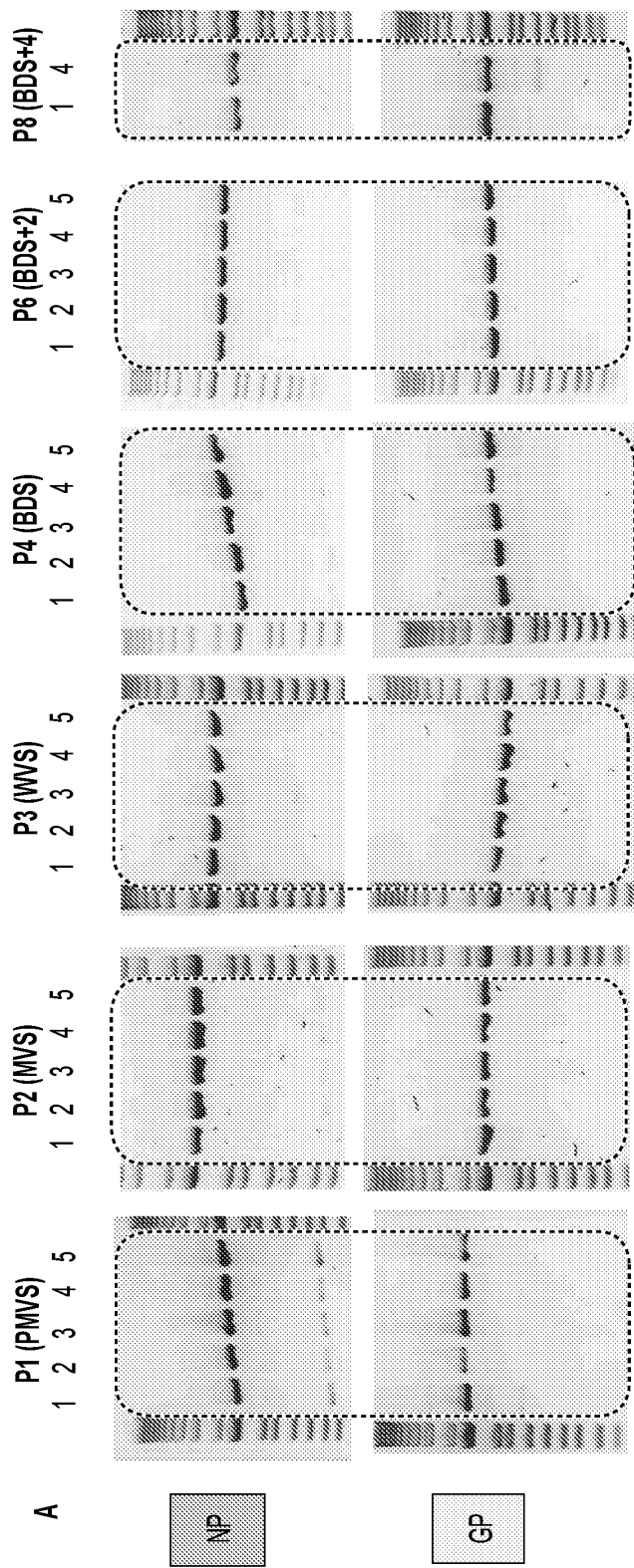


FIG. 58

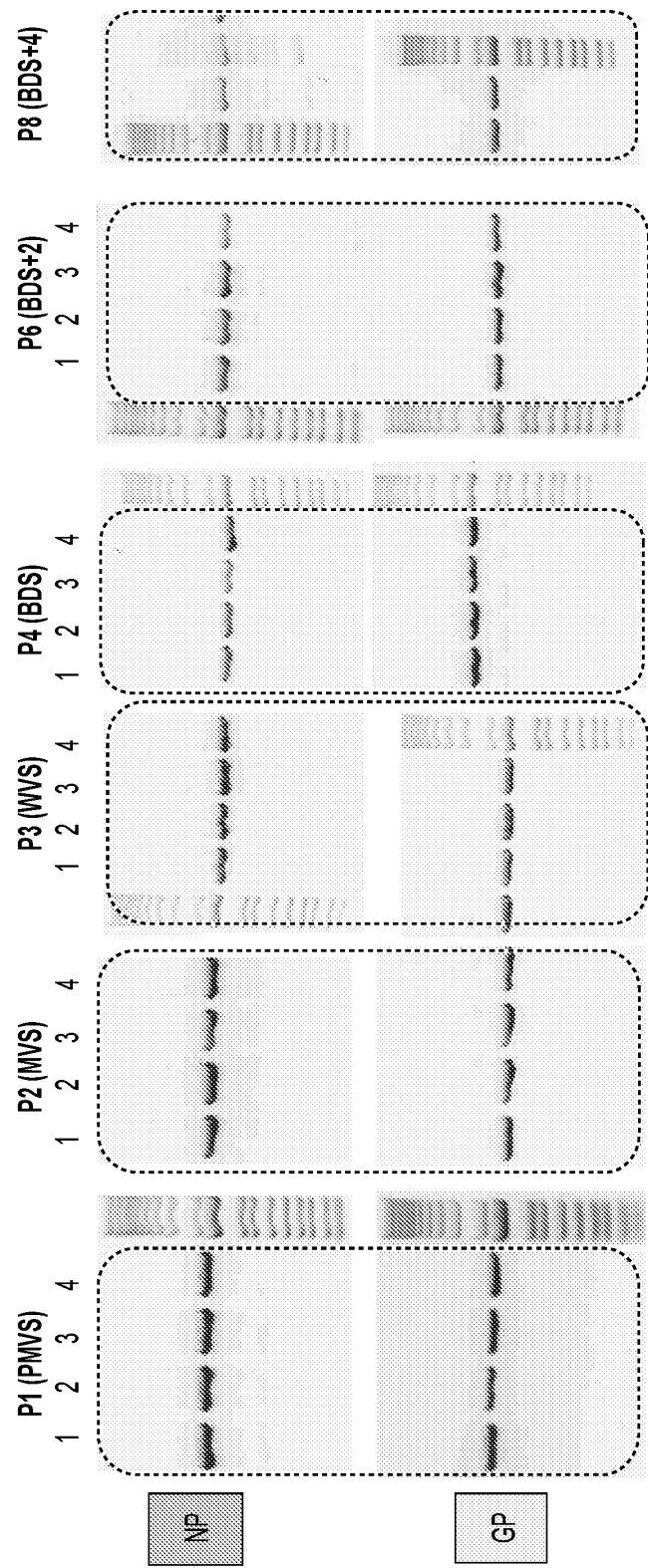


FIG. 59

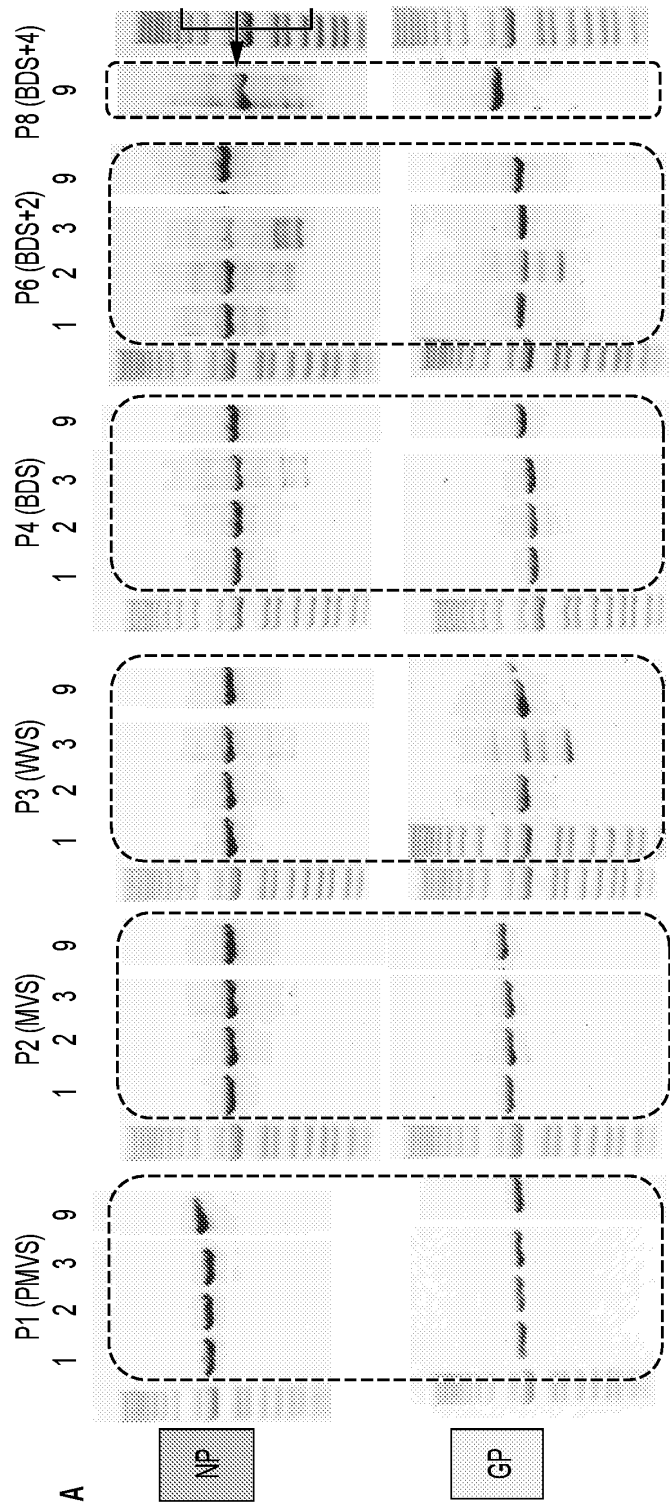


FIG. 60

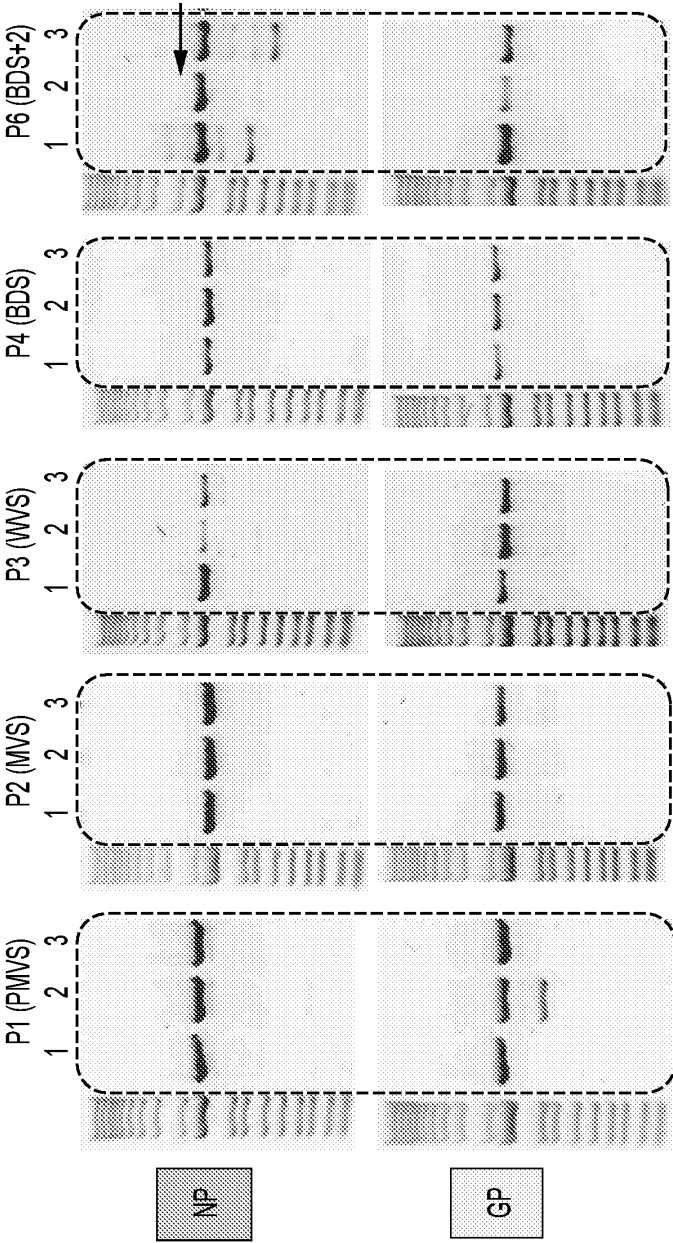


FIG. 61

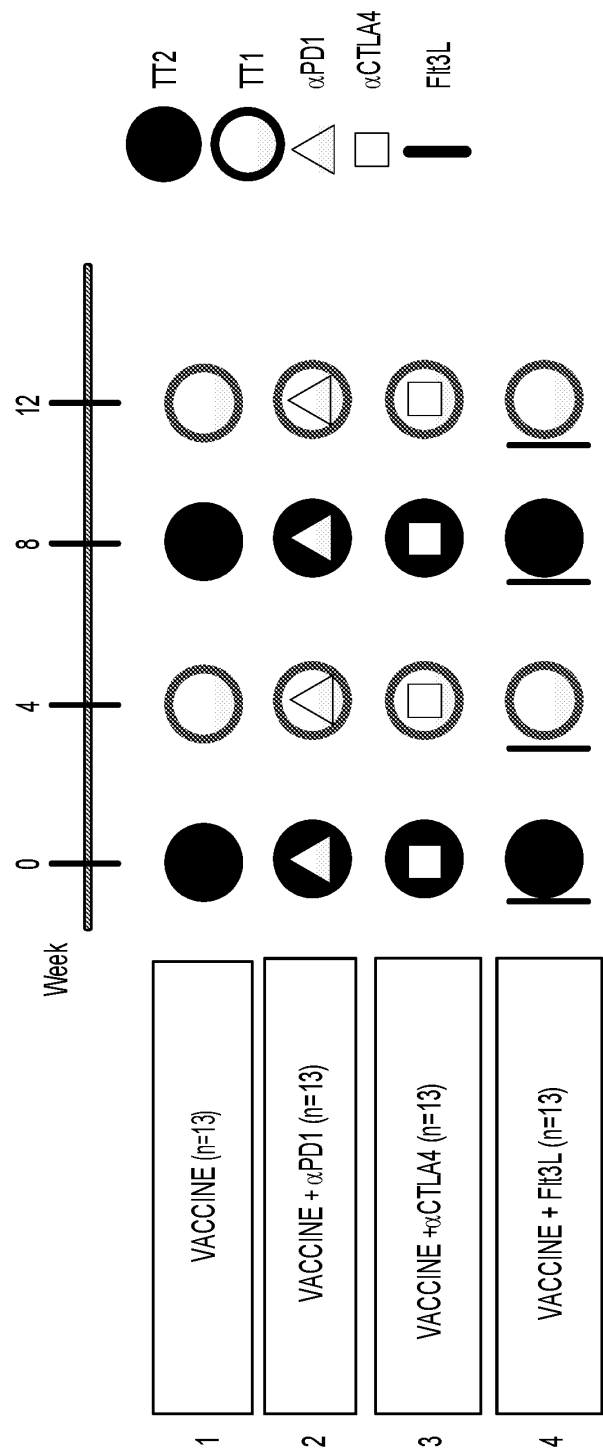


FIG. 62

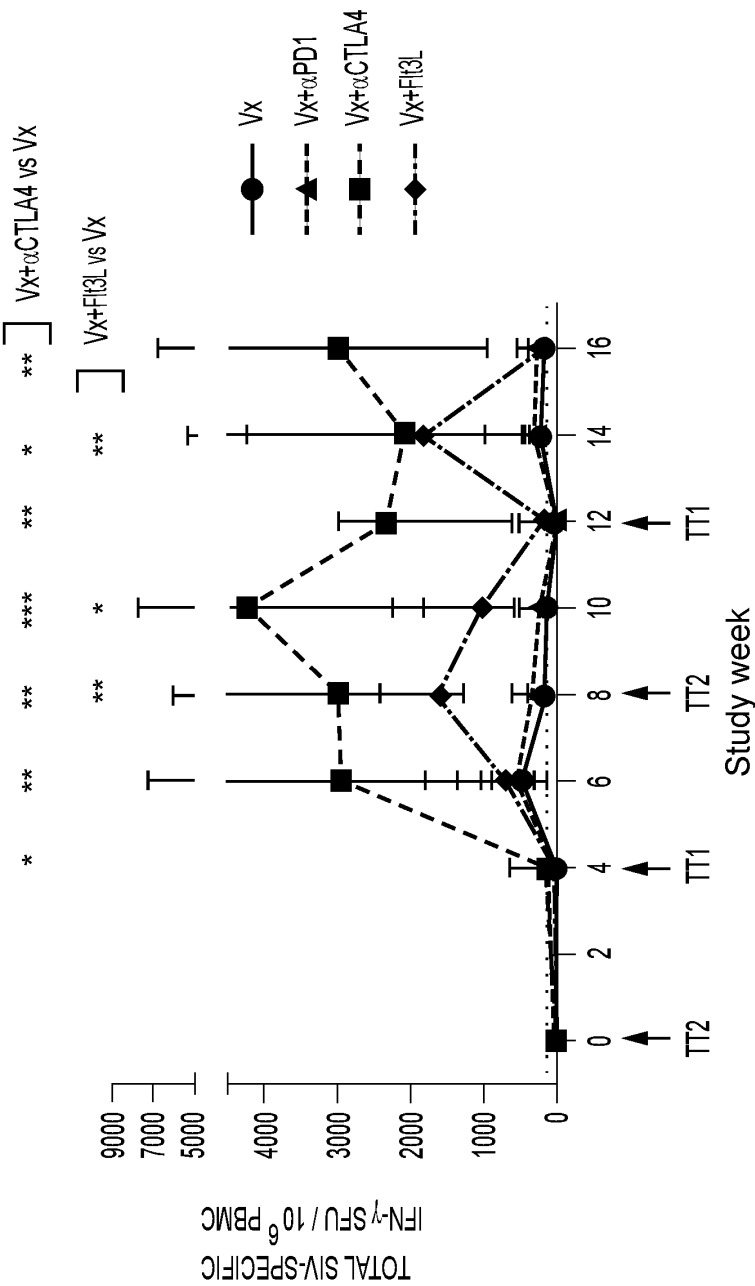


FIG. 63

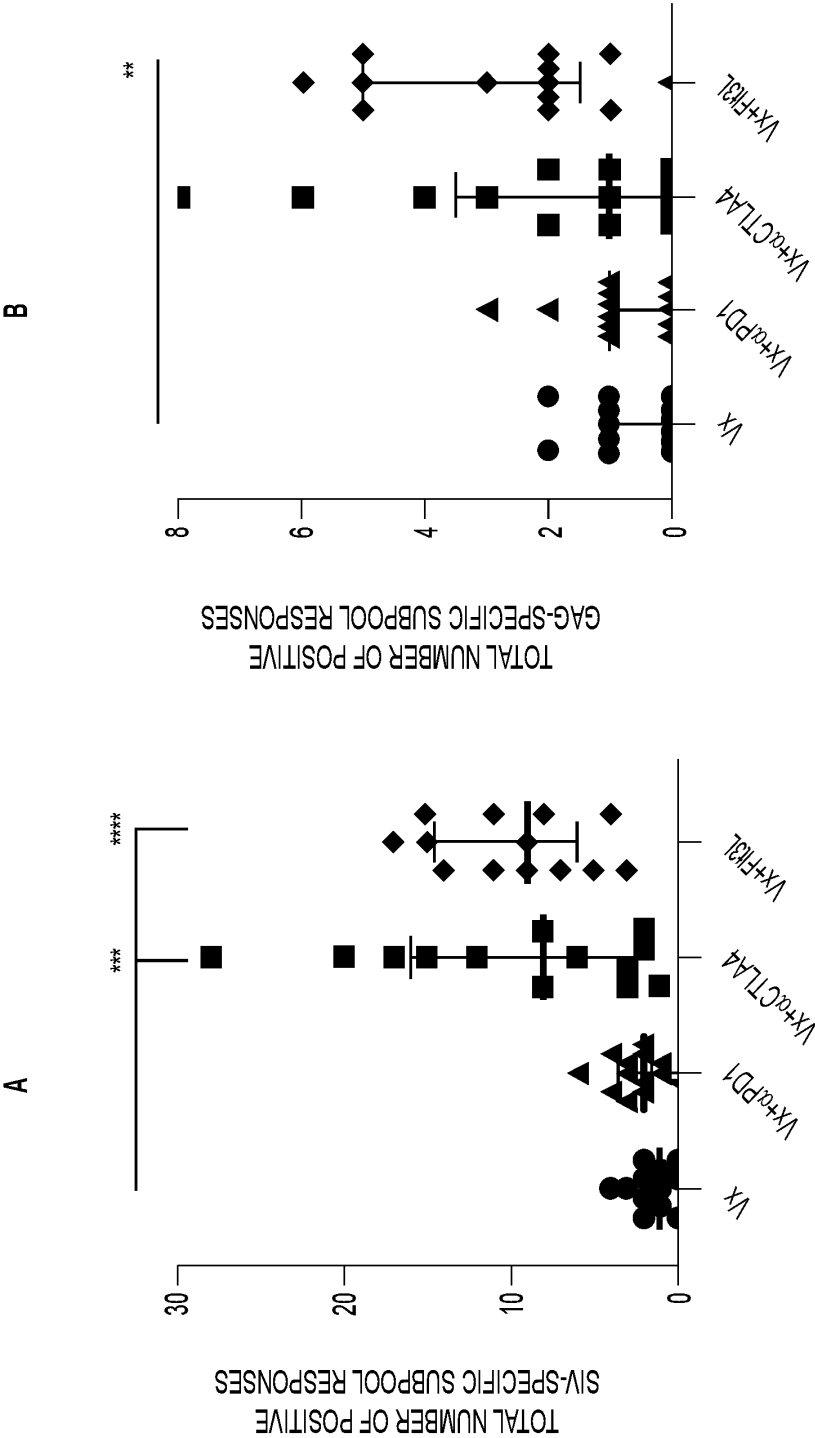


FIG. 64A-B

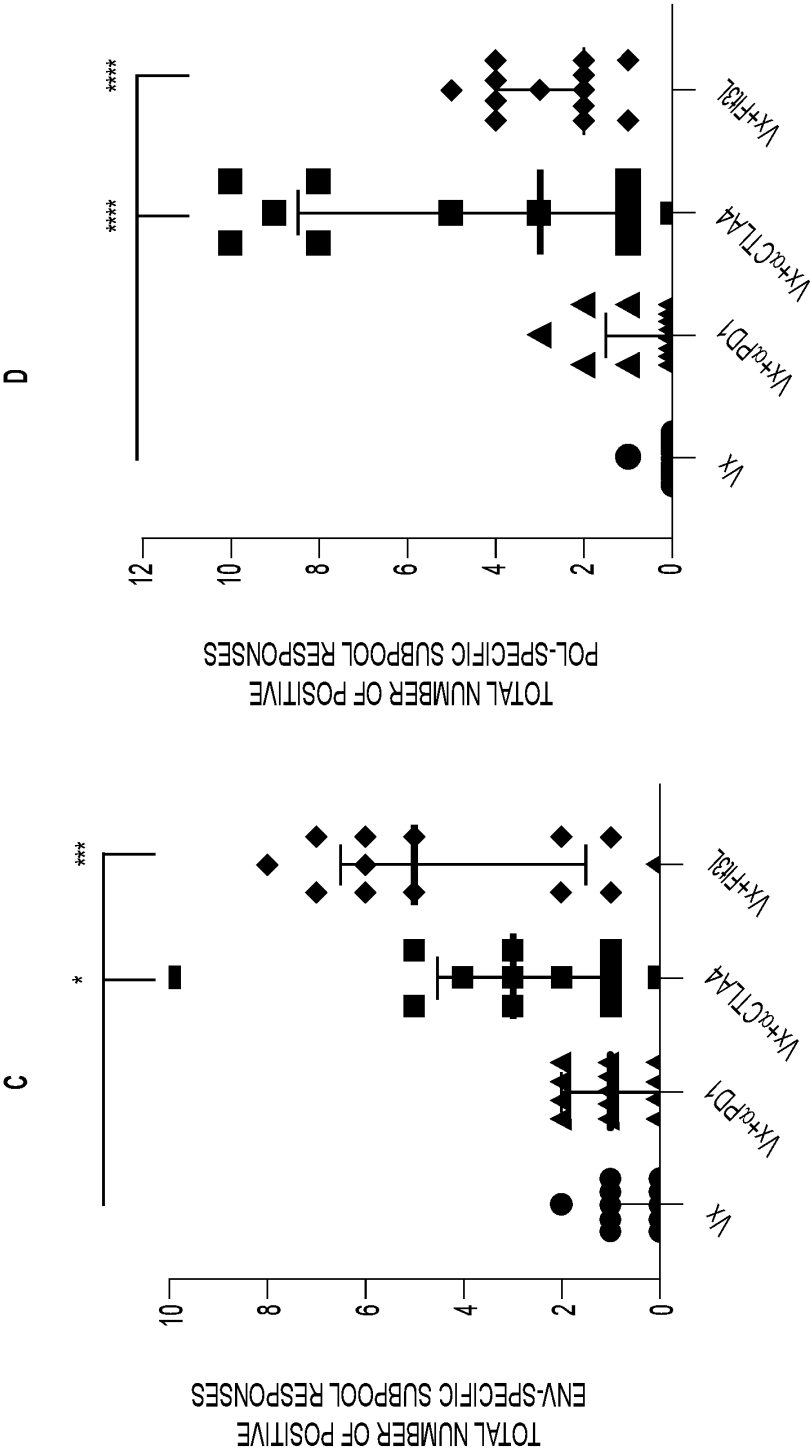


FIG. 64C-D