

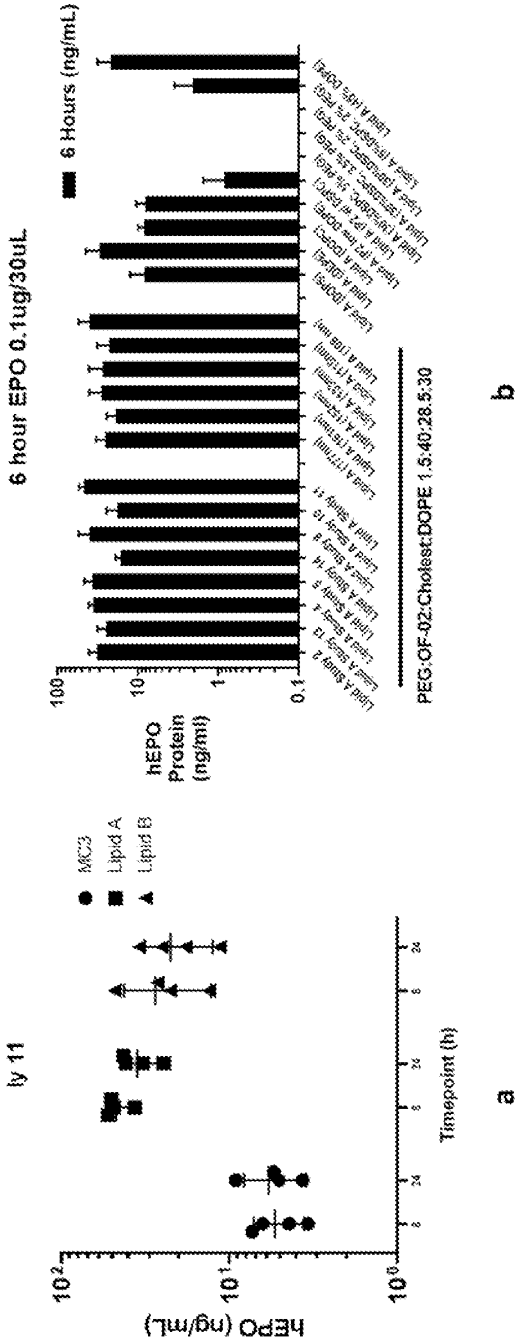


FIG. 1A

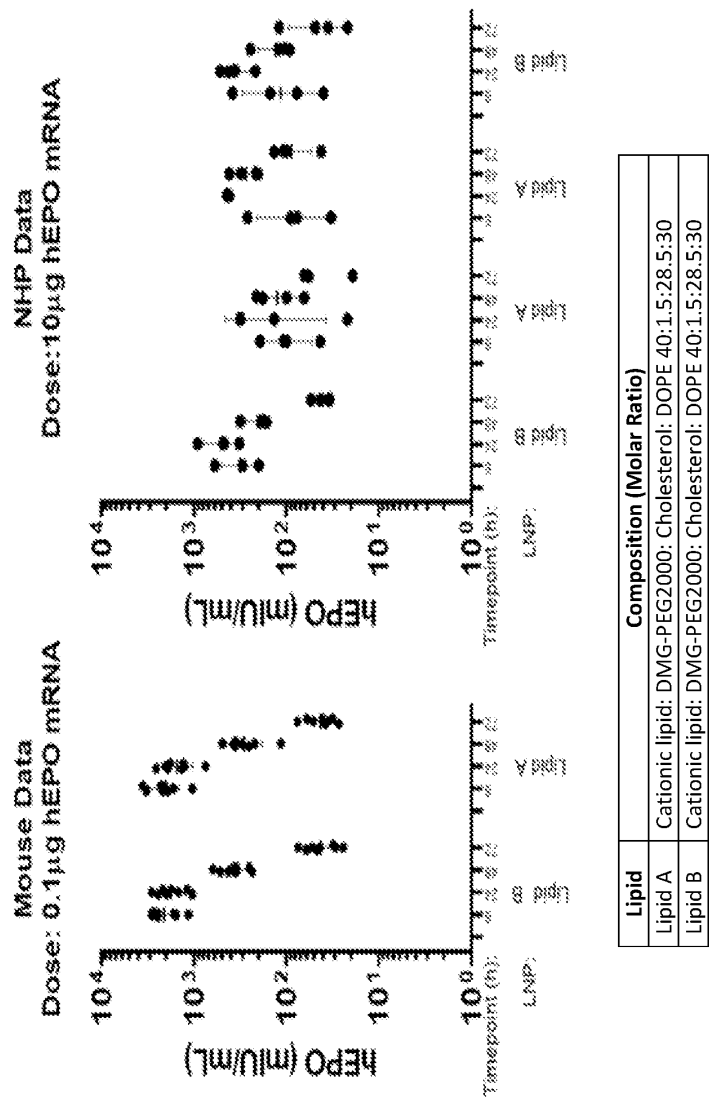


FIG. 1B

Mouse HAI Titers
Ca09 HA mRNA, 0.4µg

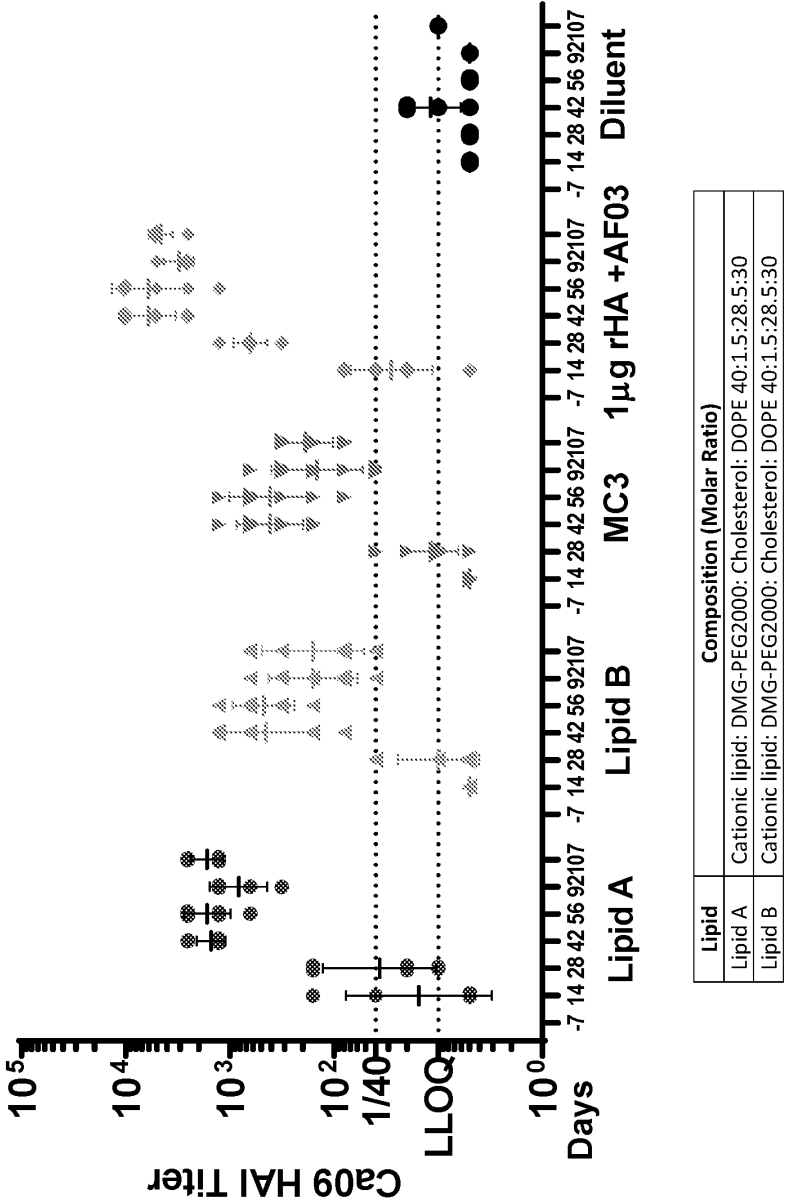


FIG. 2A

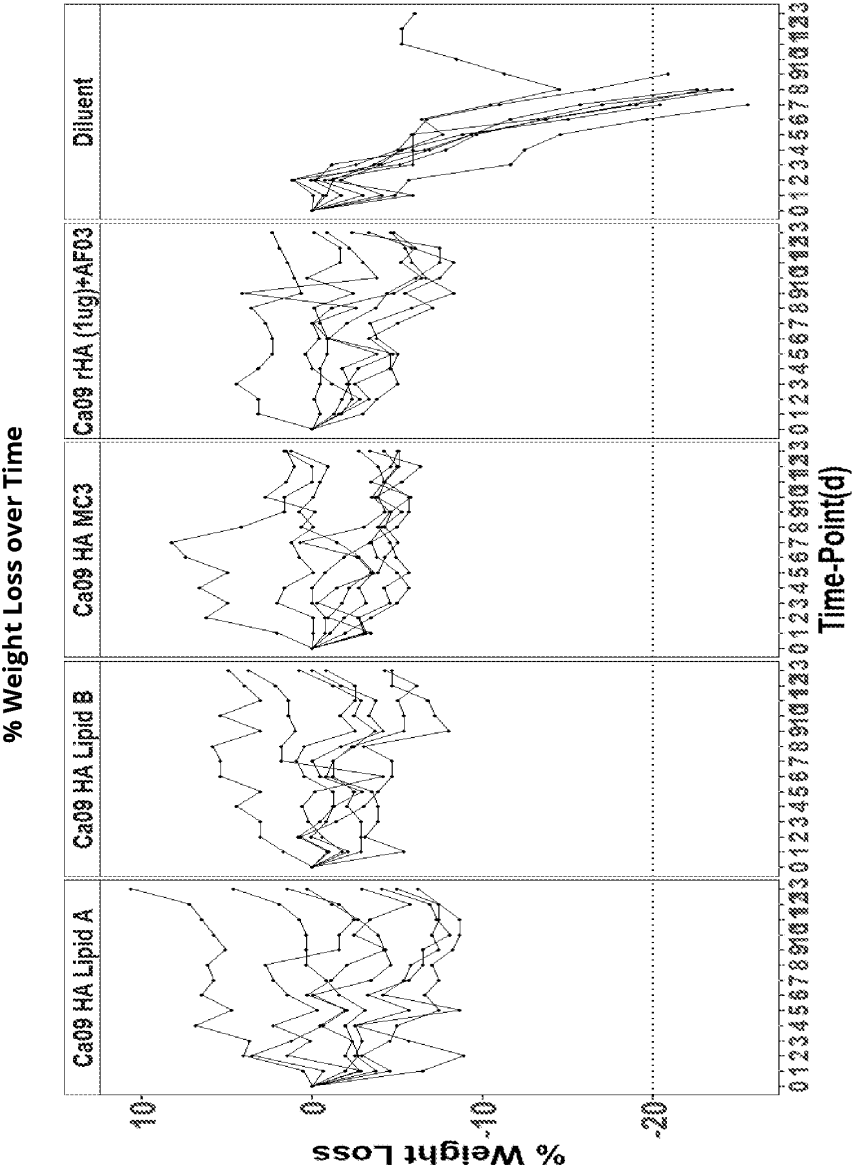
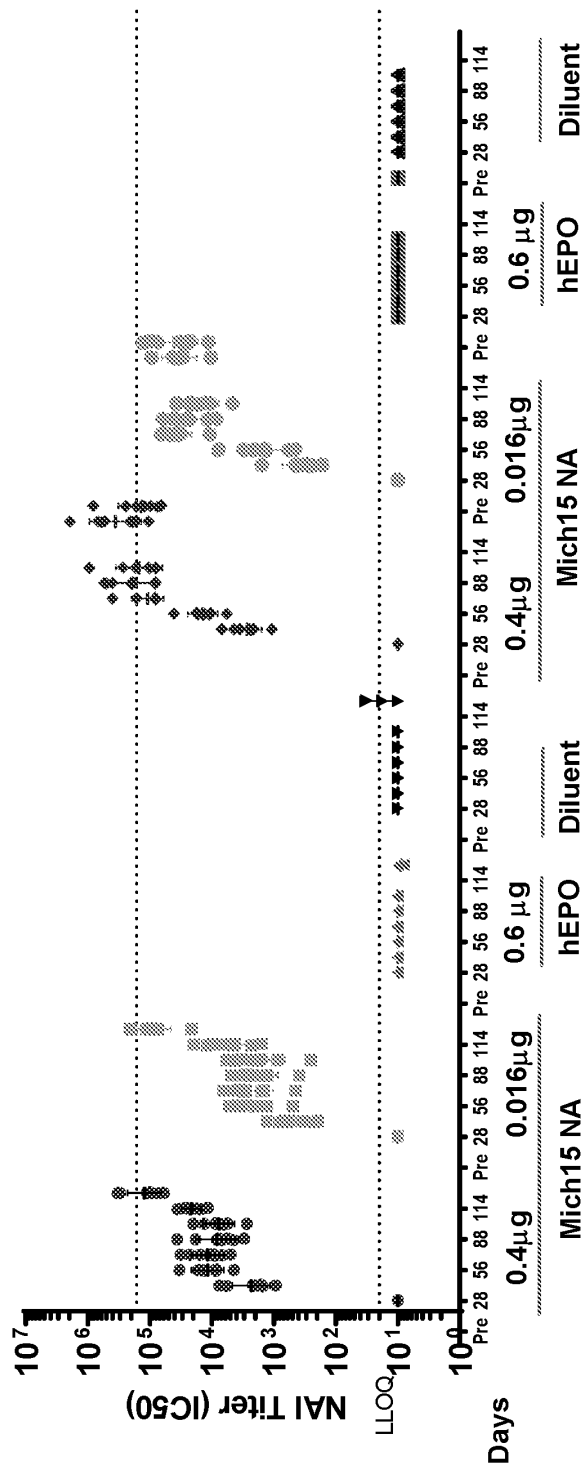


FIG. 2B

Mouse NAI Titers
Mich15 NA mRNA



Lipid	Composition (Molar Ratio)
Lipid A	Cationic lipid: DMG-PEG2000: Cholesterol: DOPE 40:1.5:28.5:30

FIG. 3A

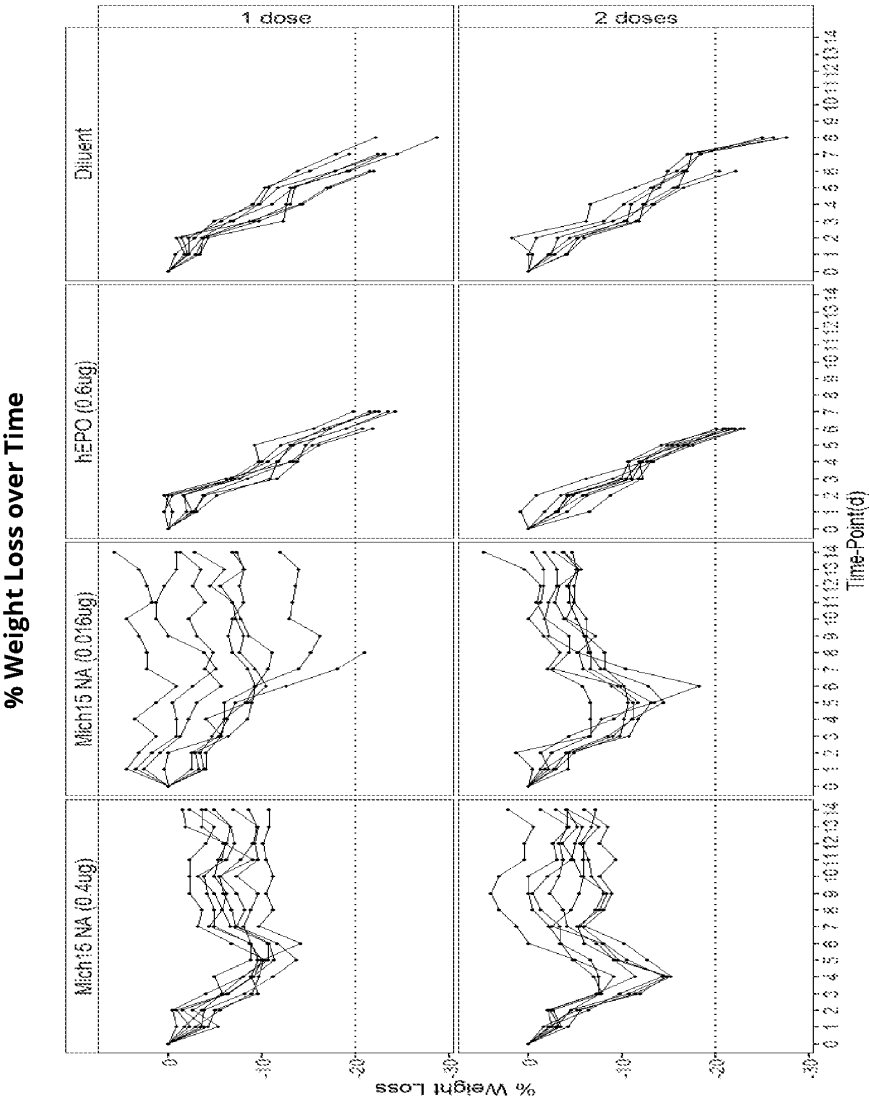


FIG. 3B

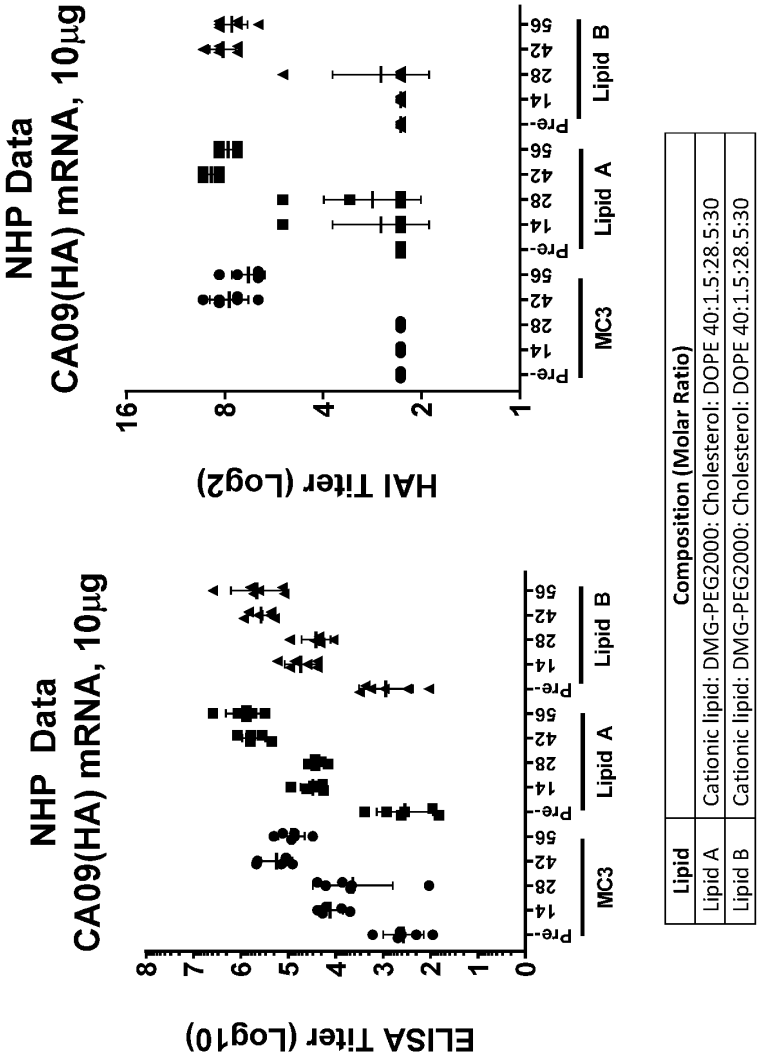


FIG. 4

MERT10279	H3_WT	ATGAAAACCAATACCGGCTCTCATACATCTTTTGGCTGGTCTTTGGCCAAAGAATCCCT ATGAAGACTATCATTTGCTTTGACTACATCTATGTCTGTGTTTCTCGTCAAAAAATCCCT ***** ** ** ** * ***** ** ** ***** ** ** ***** ** ** *****
MERT10279	H3_WT	GGCAACGACAACTCAACCGCAGCCCTTTGCTTCGGCCATCAGCGCTGCGGCAACGGCACCT GGAAATGACAAATAGCAGCGACGCTGTGGCTTGGGCACCATGTCAGTCCCAACGGGAACG **
MERT10279	H3_WT	ATCGTCAAGACCATCAAAAGACCGCATCGAATGTGACCAACGCGACTGAGCTATGTGCGAG ATAGTGAACCAATCAAAATGACCGAAATGAAGTTACTTAATGCTTACTGAGTTGTTTCAG ** ** ** ** * ***** ** ***** ** ***** ** ** ***** * ** ** *
MERT10279	H3_WT	AACTCCAGCATTTGGAGAGATTTCCGATTTCTCCACACCAAAATCCTCGACGGAGAGAAATGT AATTCTCTCAATAGGTGAATATATCGCAGAGTCTCTCATCAGATCCTTTGATGGAGAGAACTGC ** * ***** ** ***** ** ***** ** *
MERT10279	H3_WT	ACCTTGATCGACCGCTGCTGGGGGATCCCGAGTCCGACGGATTCACGAACCAAGAAATGG ACACTAATAGATGCTCTATTGGGAGACCCCTCAGTGTGATGGCTTTCAAAATGAAGAAATGG ** * ** ** ** ** ** ** ** ** ** ** * ** ***** ** ** ***** ** ** ***** ** *****
MERT10279	H3_WT	GACCTTTTGTGGAACGGAGCAGGCATATCTGAAATTTGCTTACCCCTACGATGTGCGCCGAC GACCTTTTGTGGAACGAGCAAGCCATACGACAACTGTTACCTTATGATGTGCGCGGAT ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** *****
MERT10279	H3_WT	TACGCTCGCTCGGCTCTTTGTCGCTTCTCCGGGACCCCTGGAAATTCAAAACGAGAGC TATGCTCCCTTAGGTCACTAGTTGGCTCATCCGGCACACTGGAGTTTAAAAATGAAGC ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** *****

** ***** ** **** * ** ** ** ** ***** ** ***** ** ***** ** ***** ** *****
 TTTAATTGGACCGGAGTGACCCAGATGSGACCTCGAGCGCCTGCATTTCGGGGCTCCCTCC
 TTCGAATTGGAGTGGTCACTCAAAACGGAACAGTTCCTGCTGCATAAAGGGGATCTAGT
 ** ***** ** **** * ** ** **
 TCGAGCTTCTTCAGCCGCTGAACTGGCTCACTACCTCACTACCTCACTACCTACCTACCTACCTACCTG
 AGTAGTTTCTTTAGTAGATTAATTTGGTTGAGCCACCTTAACTACACATATCCAGCATTG
 ** ***** ** * ** *** * ** *** * ***** ** ***** ** ***** ** *****
 AACGTGACCATGCCGAACAAGGAACAATTTCGACAAAGCTCTACATTTGGGGGGTGCATCAC
 AACGTGACTATGCCCAACAAAGGAACAATTTCGACAAATTTGACATTTGGGGGGTTCCACCAC
 ***** ** ***** ***** ***** * ***** ***** ** *****
 CCGGTACCGATAGGACCAAGATCTTCTCTACGCCCAATCTCGGGCCGGATCACCGTG
 CCGGTACGGACAAGCAACCAATCTTCTGTGTGCTCAATCAATCAGGAAGAAATCACAGTA
 ***** ** ***** ***** ** ***** ** ***** ** ***** ** *****
 TCCACTAAGCGCTCGACGACGCGGTGATCCCGGAACATTGGAAGCAGACCCCGCATTCGC
 TCTACCAAAAGAACCAACAGCTGTAATCCCAATATCGGATCTAGACCCAGATAAAGG
 ** ** ** * ** ** ** ** ***** ** ***** ** ***** ** ***** *
 GACATTCATCGAGGATCTGATCTACTGAGCAGATTGTCAAGCCTGGCGACATCTCTCTC
 GATATCCCTAGCAGAAATAGCATCTATTGGACAAATAGTAAAACCGGGAGACATACTTTTG
 ** ** ** ** ** ** ** ***** ***** ** ***** ** ***** ** ***** ** *****
 ATTAACGCCCGGGAACCTCATCGCCCTCGGGTTATTTCAGATCCGCGCGGGGAG
 ATTAACGACACAGGGAATCTAATTGCTCTAGGGGTACTTCAAAATACGAAGTGGGAAA
 ***** ** ***** ** ** ** ***** ***** ***** ** *****
 TCCTCCATCATGAGAGCGATGCCCTCATTTGAAAGTGCAAGTCCGAGTGTATCACACT
 AGCTCAATAATGAGATCAGATGACCCCATTTGGCAATGCAAGTCTGATGCATCACATCCA
 *** ** ***** ***** ***** ** ***** ** ***** ** *****
 AACGGAAGCATTCCTCAATGACAAAGCATTCACGAACGTTCCGAACGTAACAGAAATTACCTACGGAGCT
 AATGGAAGCATTCCTCAATGACAAACCATTCCTCAAAATGTAACAGGATCACATACGGGCC
 ** ***** ***** ***** ***** ** ***** ** ***** ** *****
 TGGCTCGCTAGTCAAAACATTTCGACCTCAAGTTGGCGACTGGAATGCCAACGTGCCG
 TGTCCAGATATGTTAAGCATAGCATCTGAAATTTGGCAACAGGAATGCCGAATGTACCA
 ** ** * ** ** ** ** ***** ** ***** ** ***** ***** ** *****
 GAGGAAGCAAAACCCGGGGATCTTCGGGGCTATCGCGGATTCATCGAAAATGGATGGAA
 GAGAAACAACTAGAGGCATATTGGCGCAATAGCGGGTTTCATAGAAAATGGTTGGGAG

FIG. 5A (cont.)

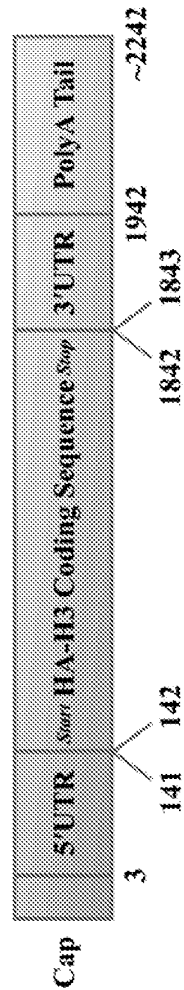
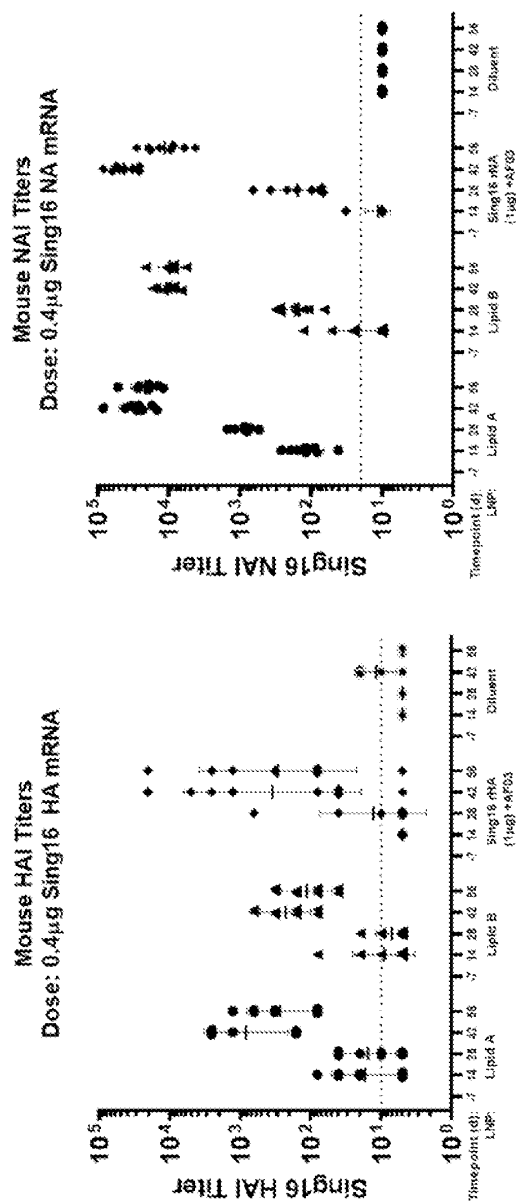


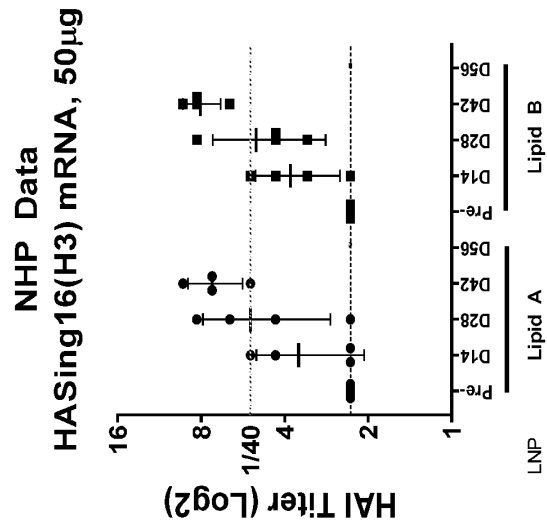
FIG. 5B

FIG. 5C



Lipid	Composition (Molar Ratio)
Lipid A	Cationic lipid: DMG-PEG2000: Cholesterol: DOPE 40:1.5:28.5:30
Lipid B	Cationic lipid: DMG-PEG2000: Cholesterol: DOPE 40:1.5:28.5:30

FIG. 6



Lipid	Composition (Molar Ratio)
Lipid A	Cationic lipid: DMG-PEG2000: Cholesterol: DOPE 40:1.5:28.5:30
Lipid B	Cationic lipid: DMG-PEG2000: Cholesterol: DOPE 40:1.5:28.5:30

FIG. 7A

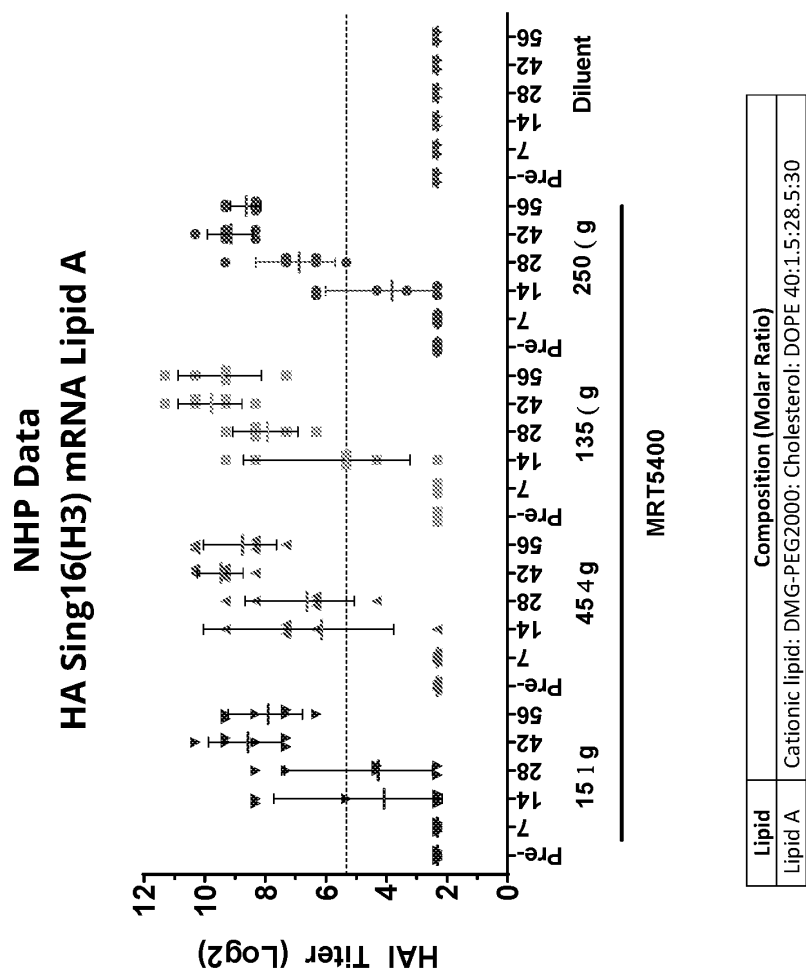


FIG. 7B

NHP Data
HA Sing16(H3) mRNA Lipid A

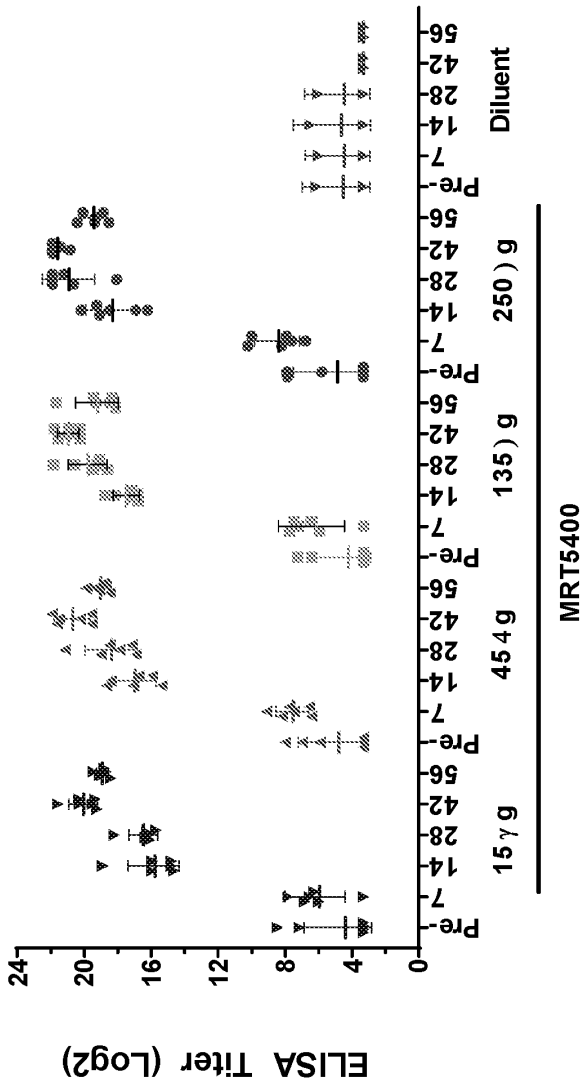
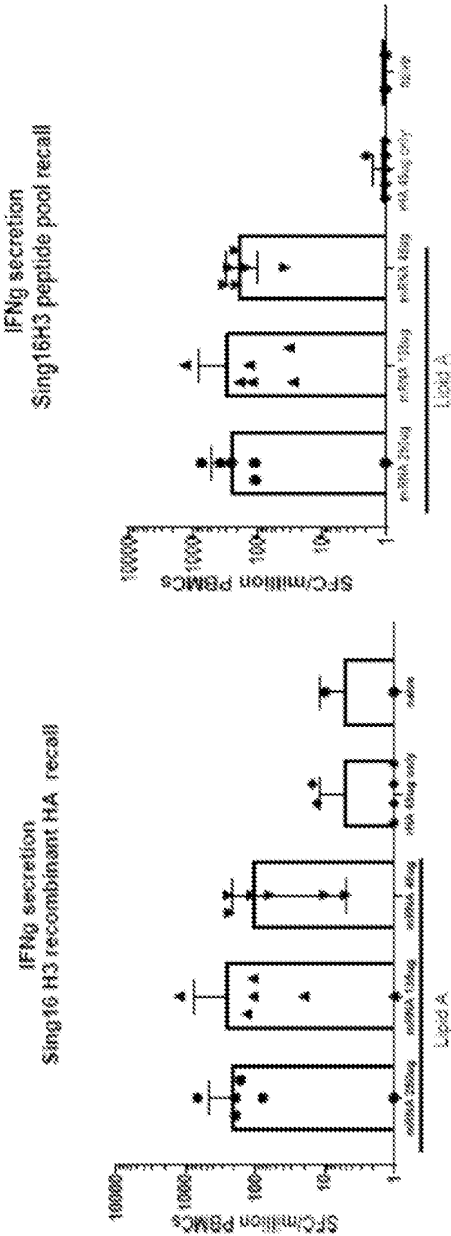


FIG. 7C



Lipid	Composition (Molar Ratio)
Lipid A	Cationic lipid: DMG-PEG2000: Cholesterol: DOPE 40:1.5:28.5:30

FIG. 8A

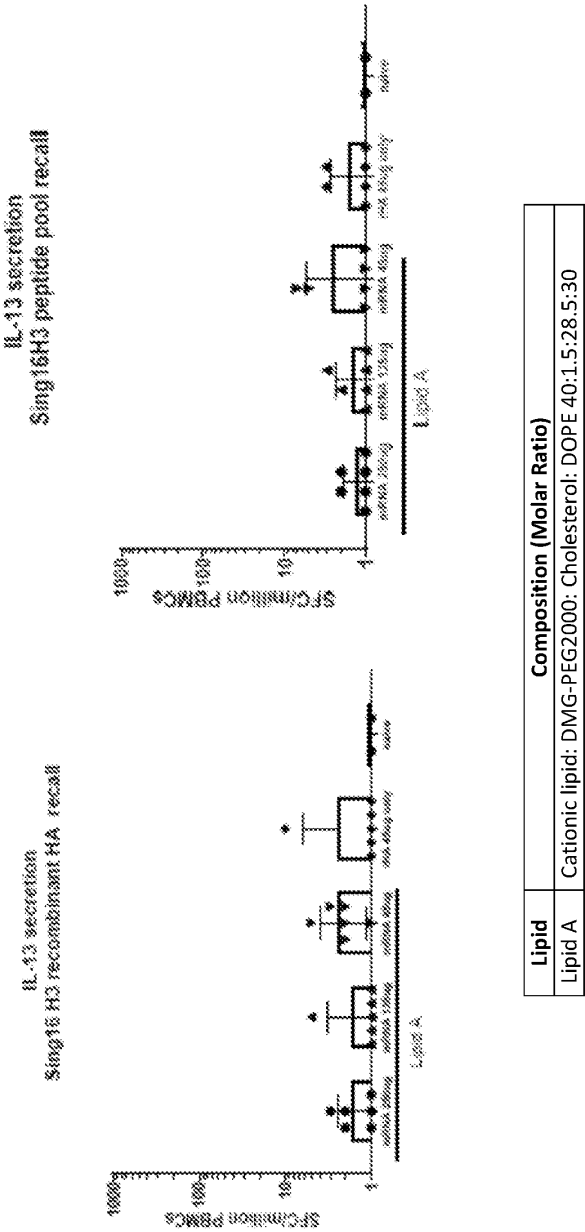


FIG. 8B

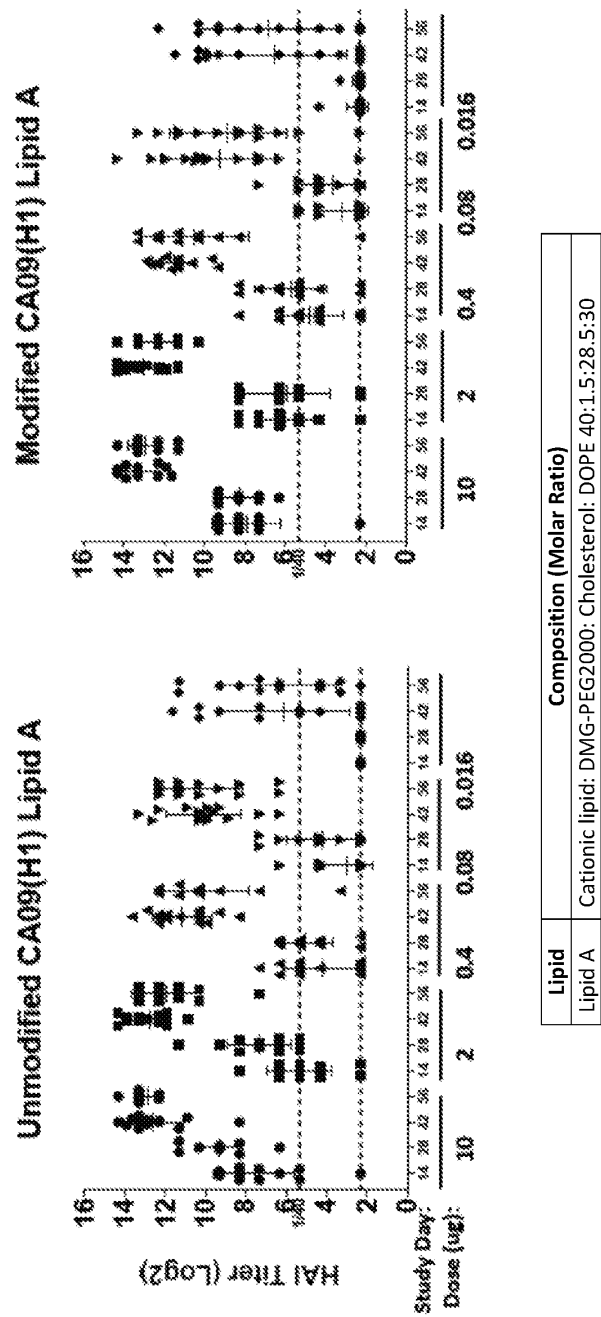
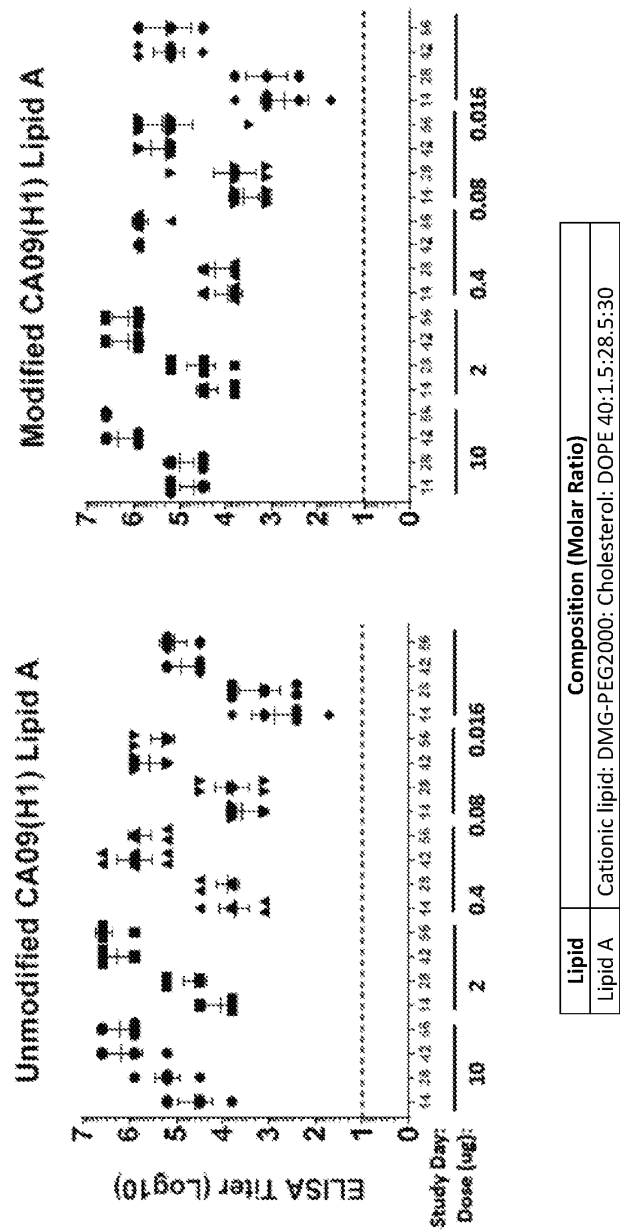


FIG. 9A



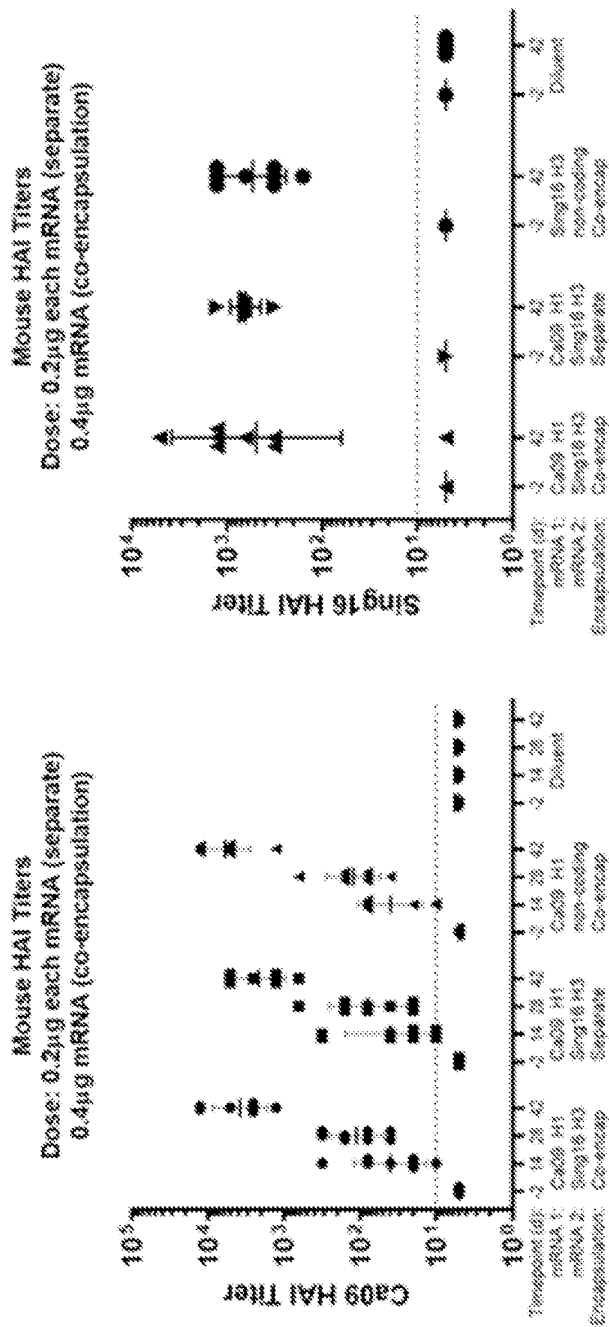


FIG. 10A

FIG. 10B

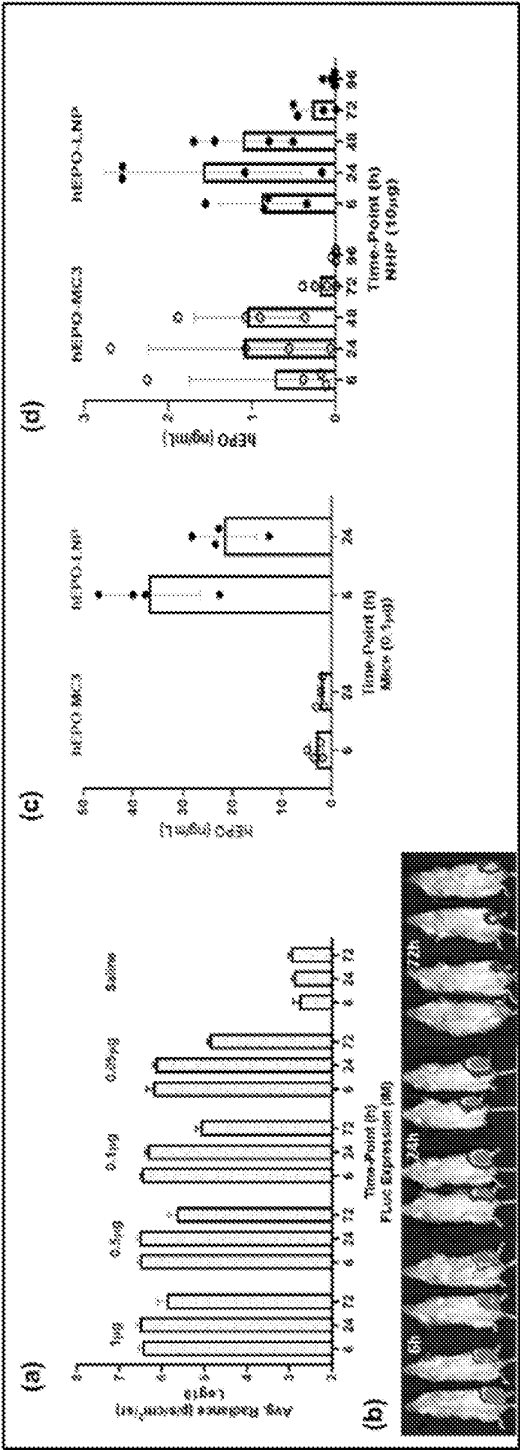


FIG. 11

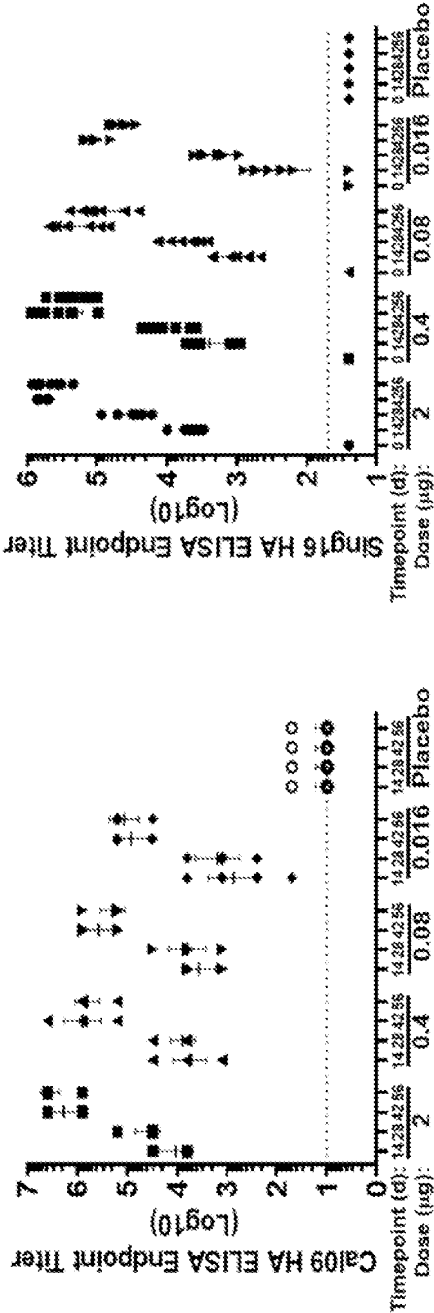


FIG. 12

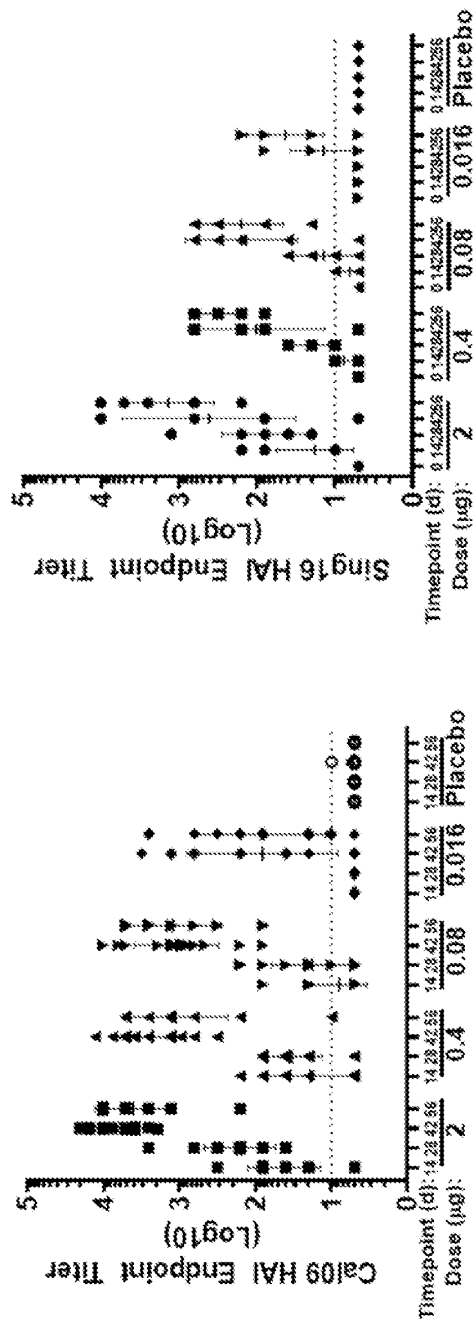


FIG. 13

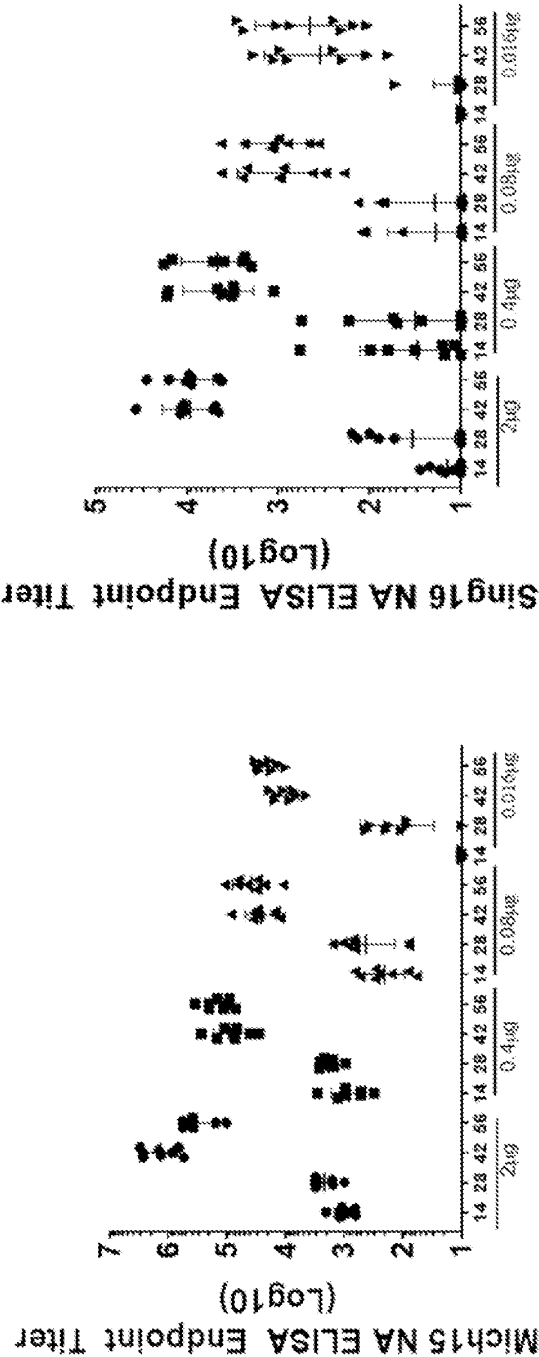


FIG. 14

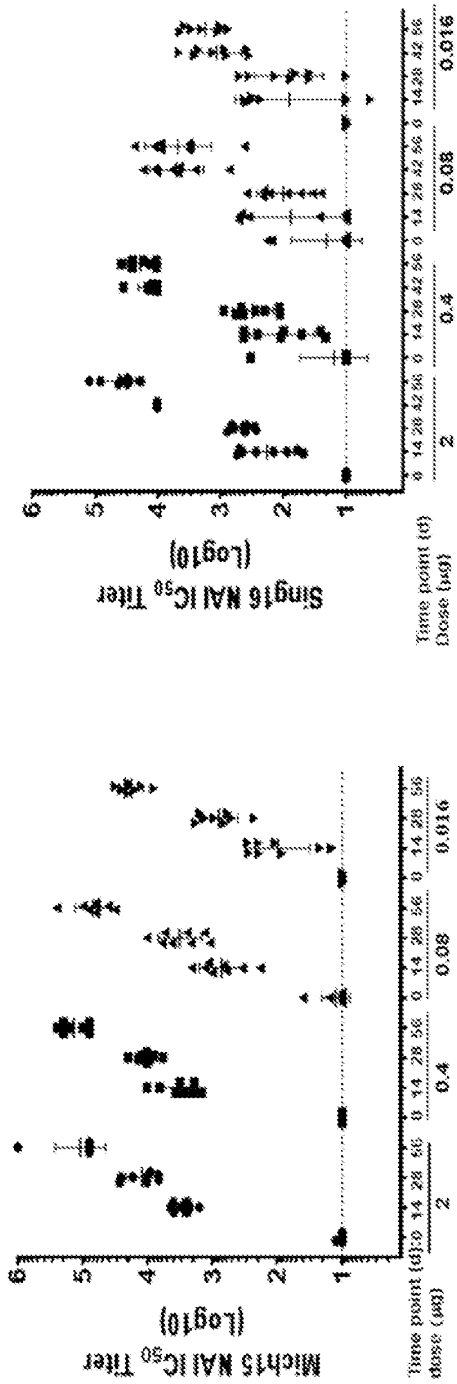


FIG. 15

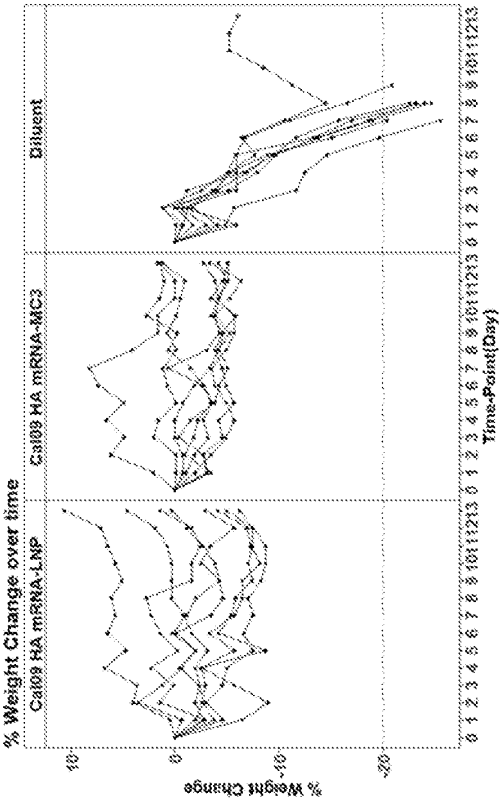


FIG. 16B

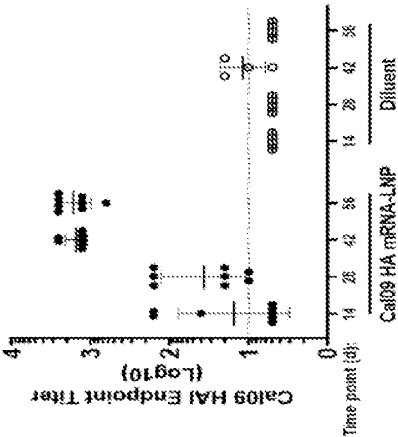


FIG. 16A

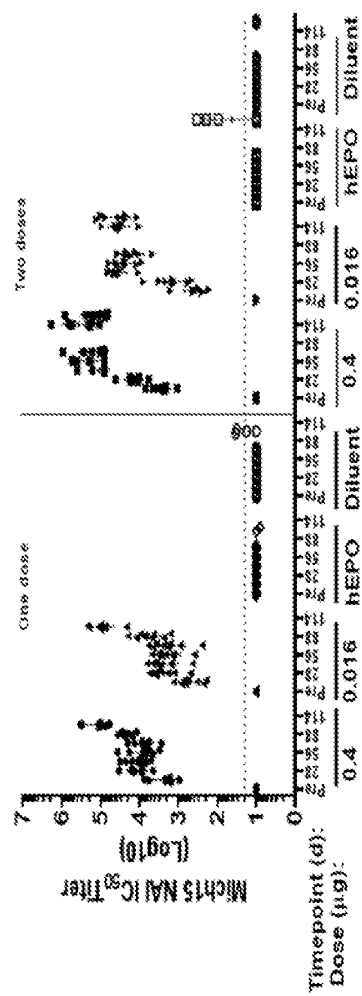


FIG. 17A

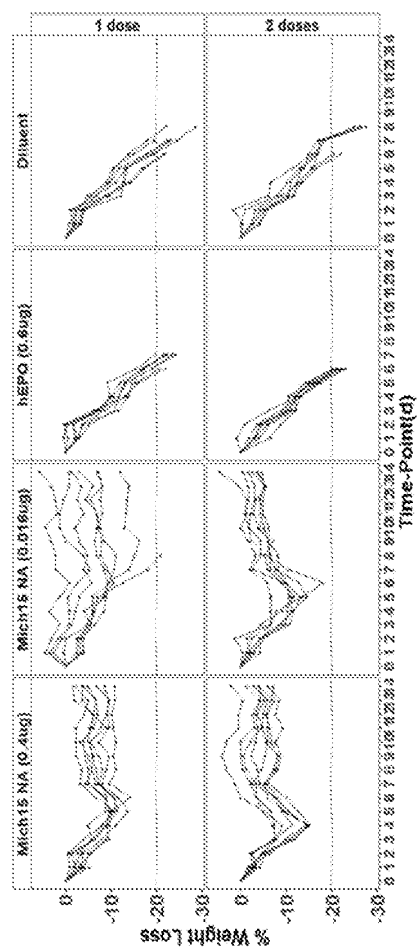


FIG. 17B

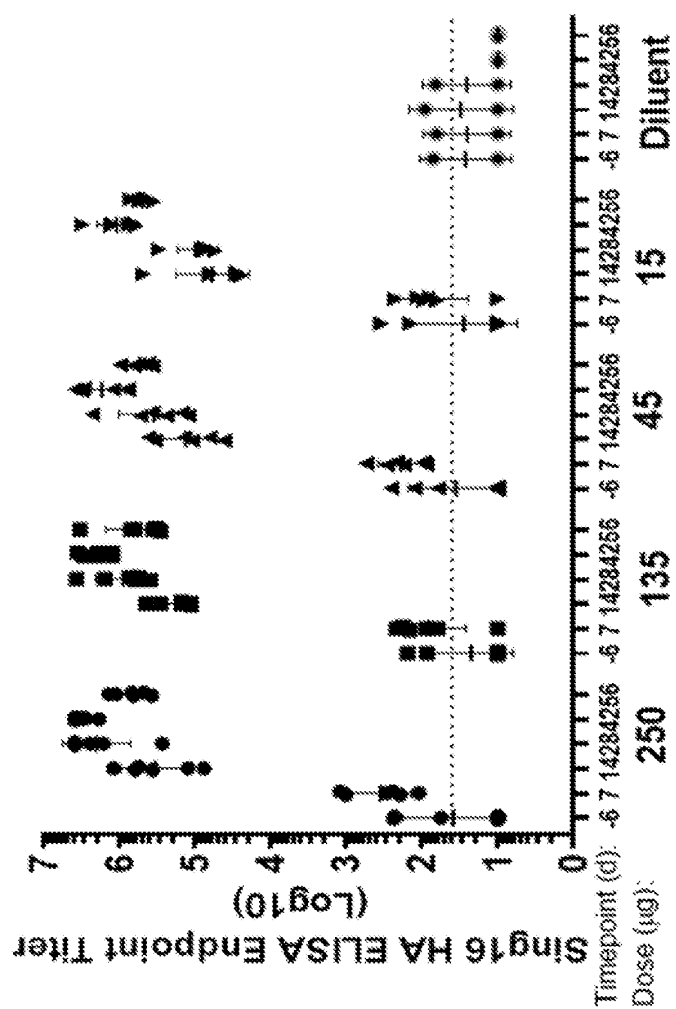


FIG. 18

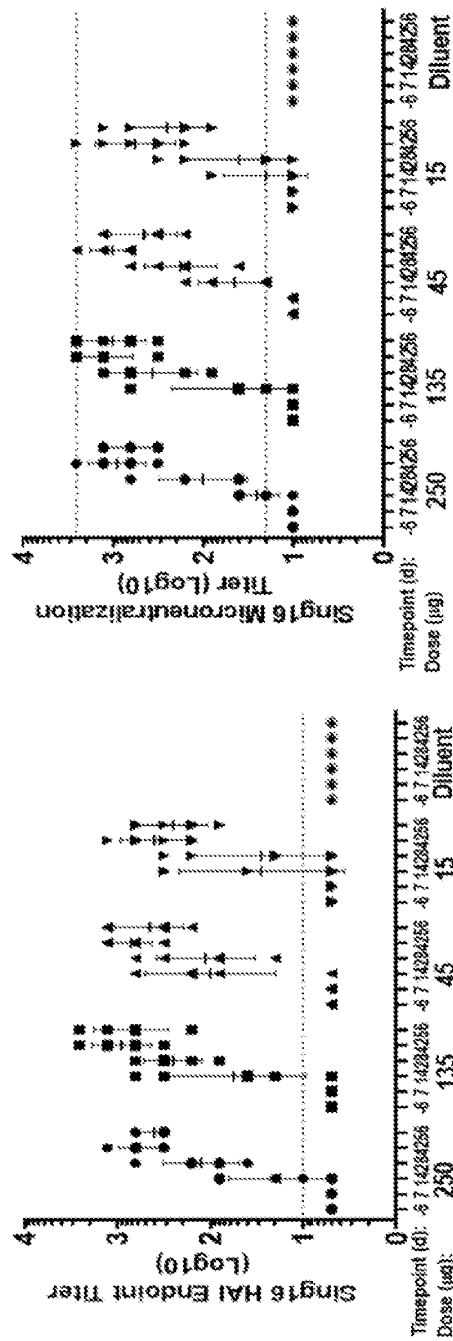


FIG. 19B

FIG. 19A

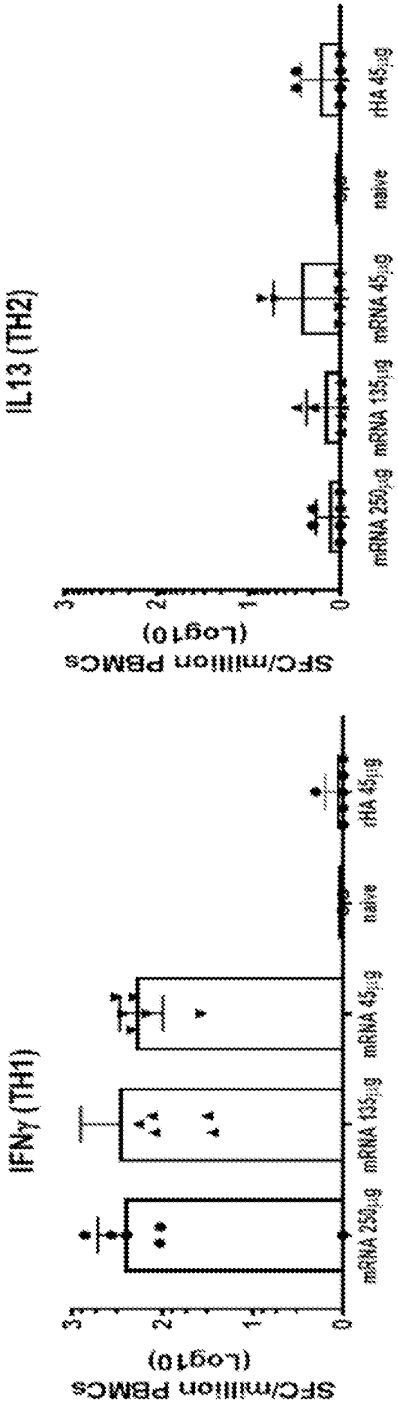


FIG. 20B

FIG. 20A

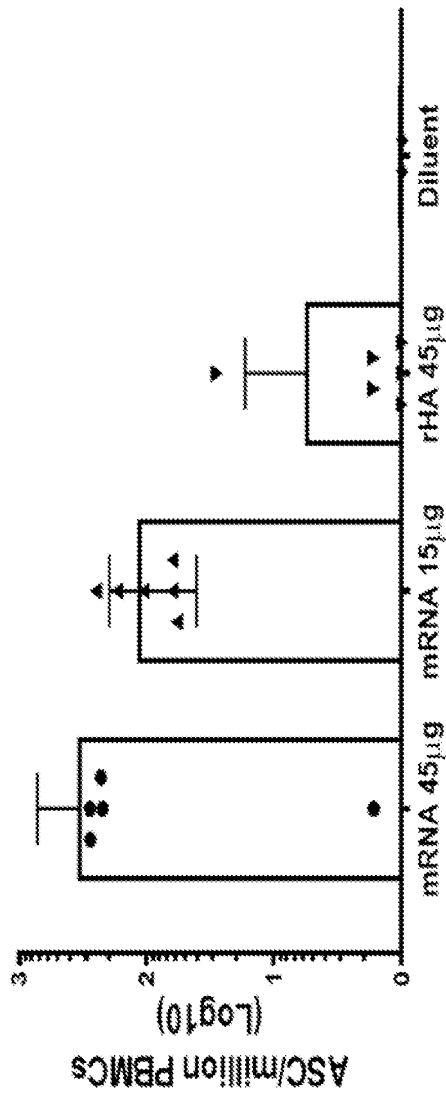


FIG. 21

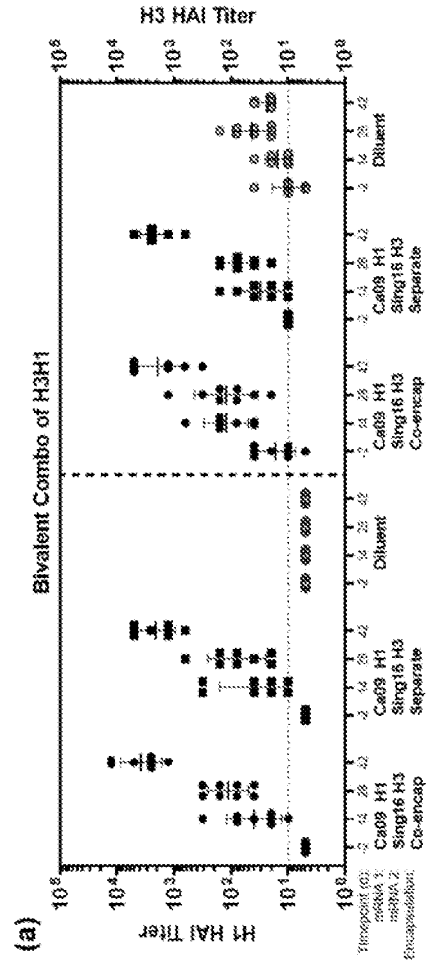


FIG. 22

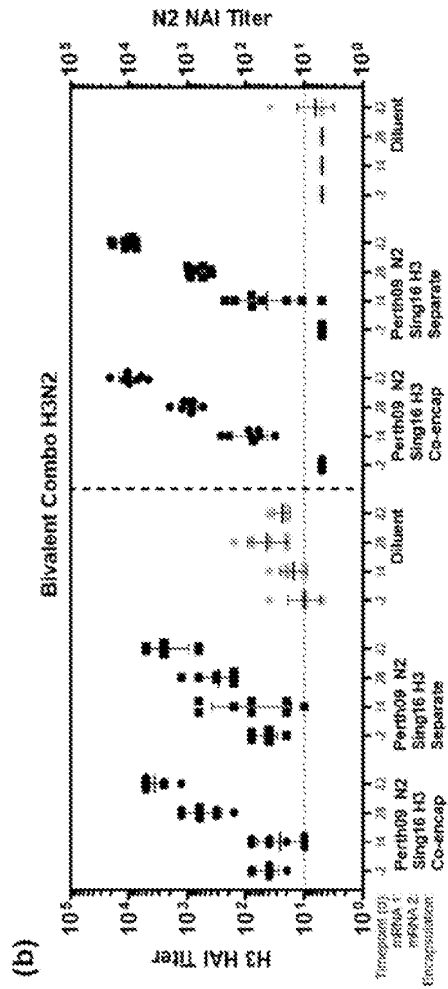


FIG. 22 (cont'd)

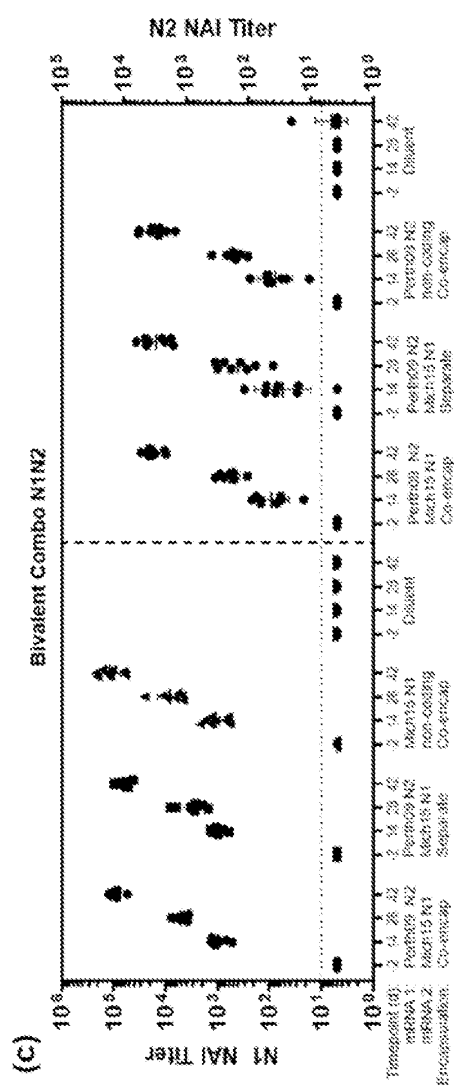


FIG. 22 (cont'd)



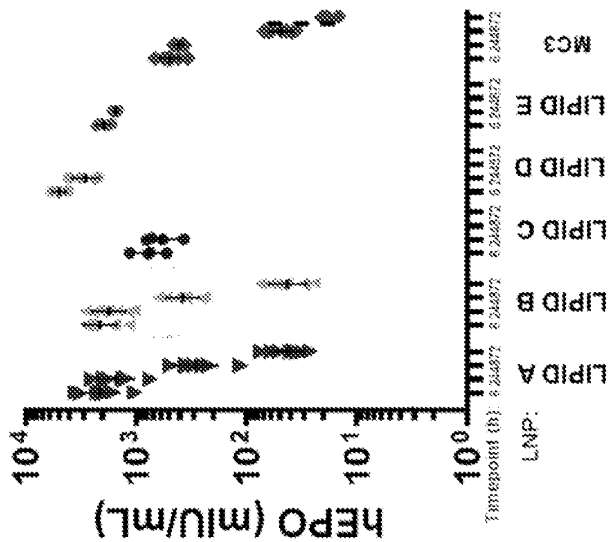


FIG. 24

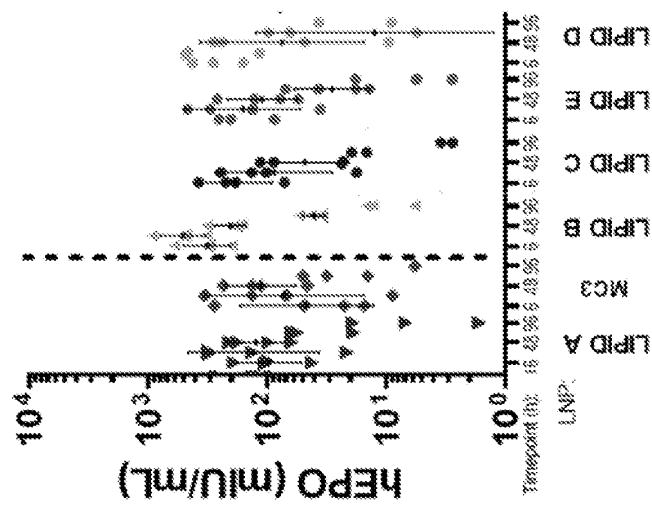


FIG. 25

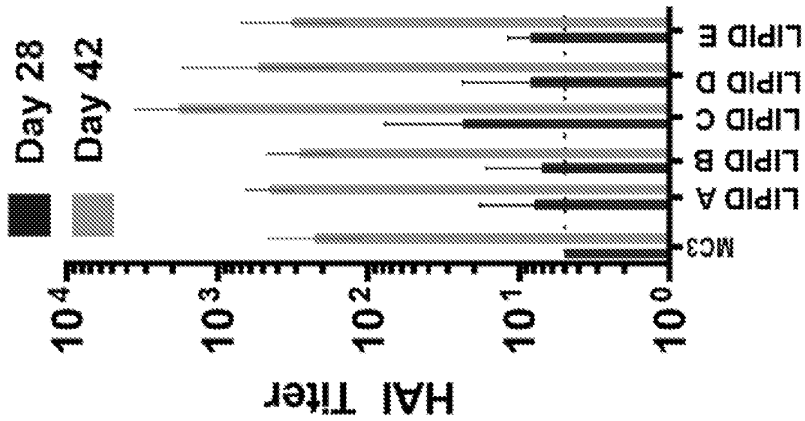
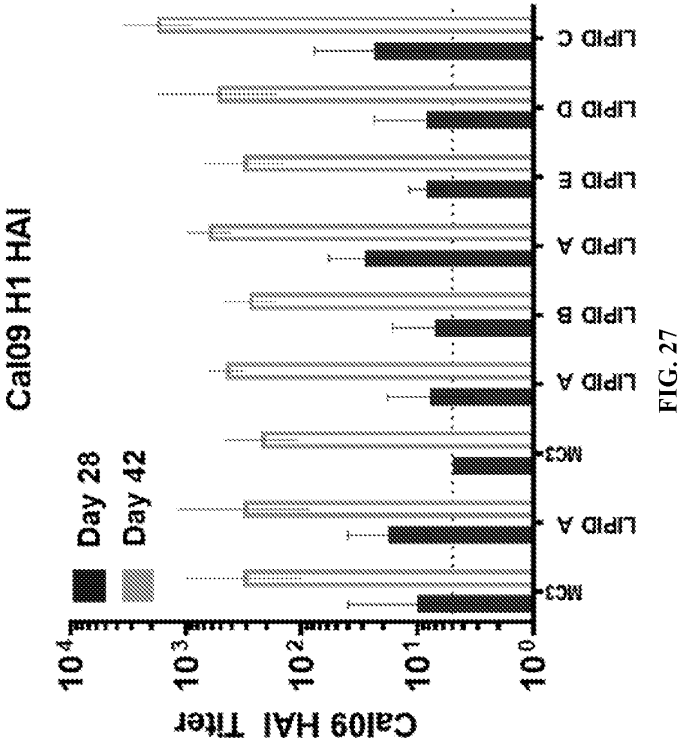


FIG. 26



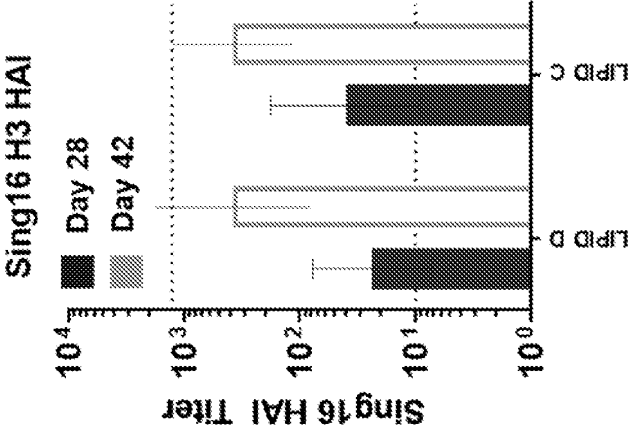


FIG. 28

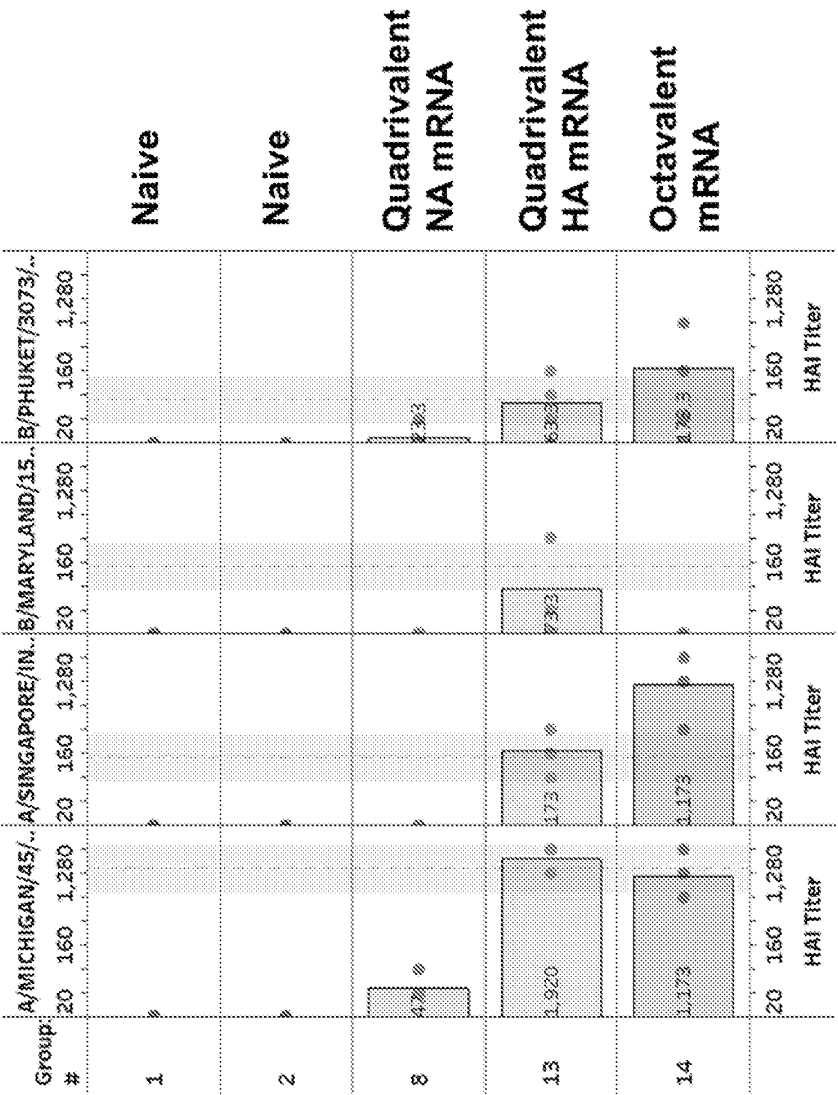


FIG. 29

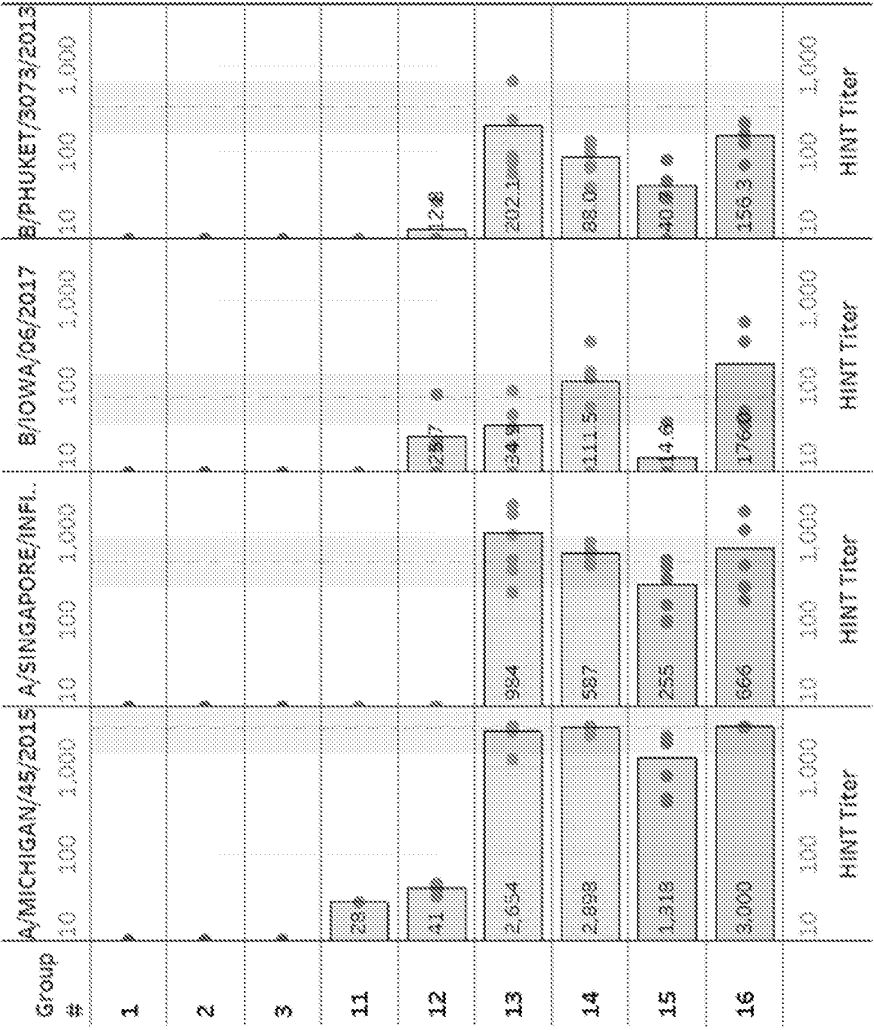


FIG. 30

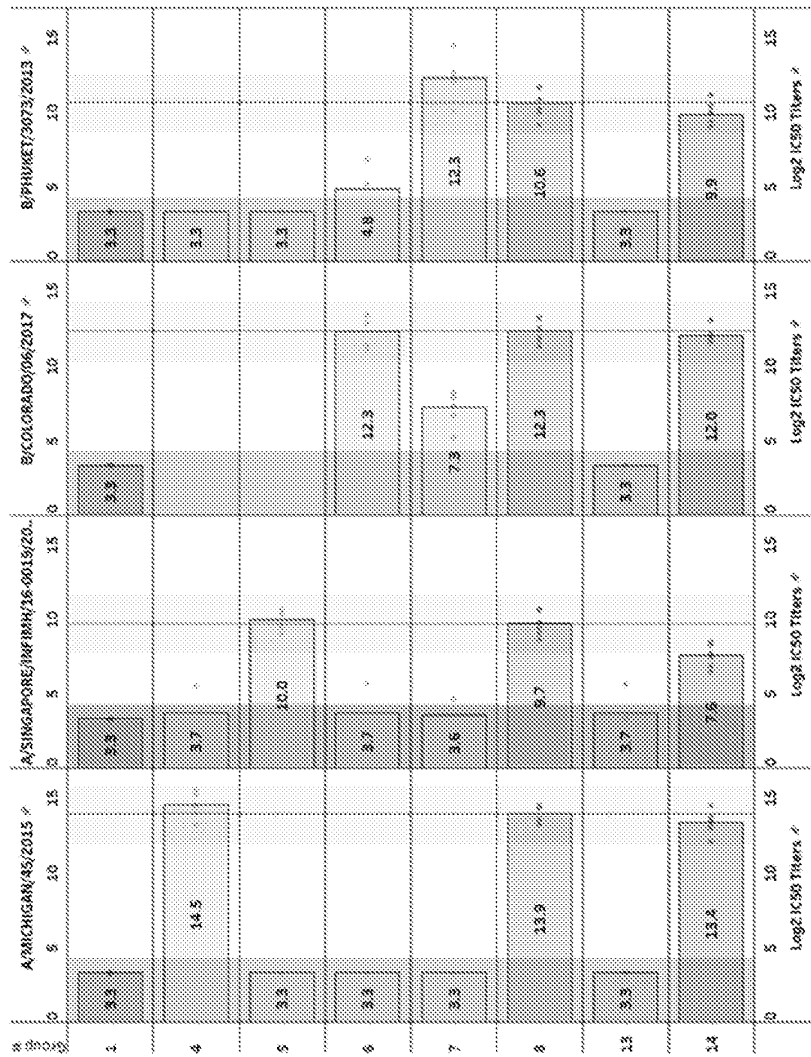


FIG. 31

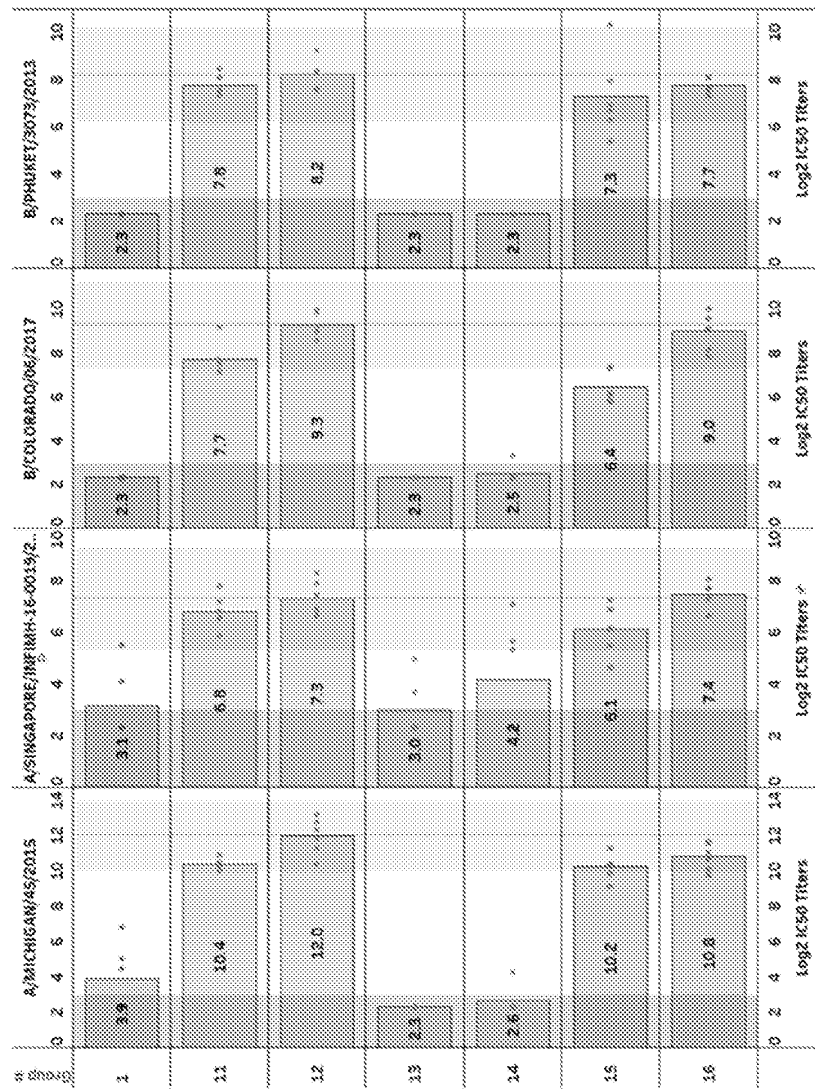


FIG. 32

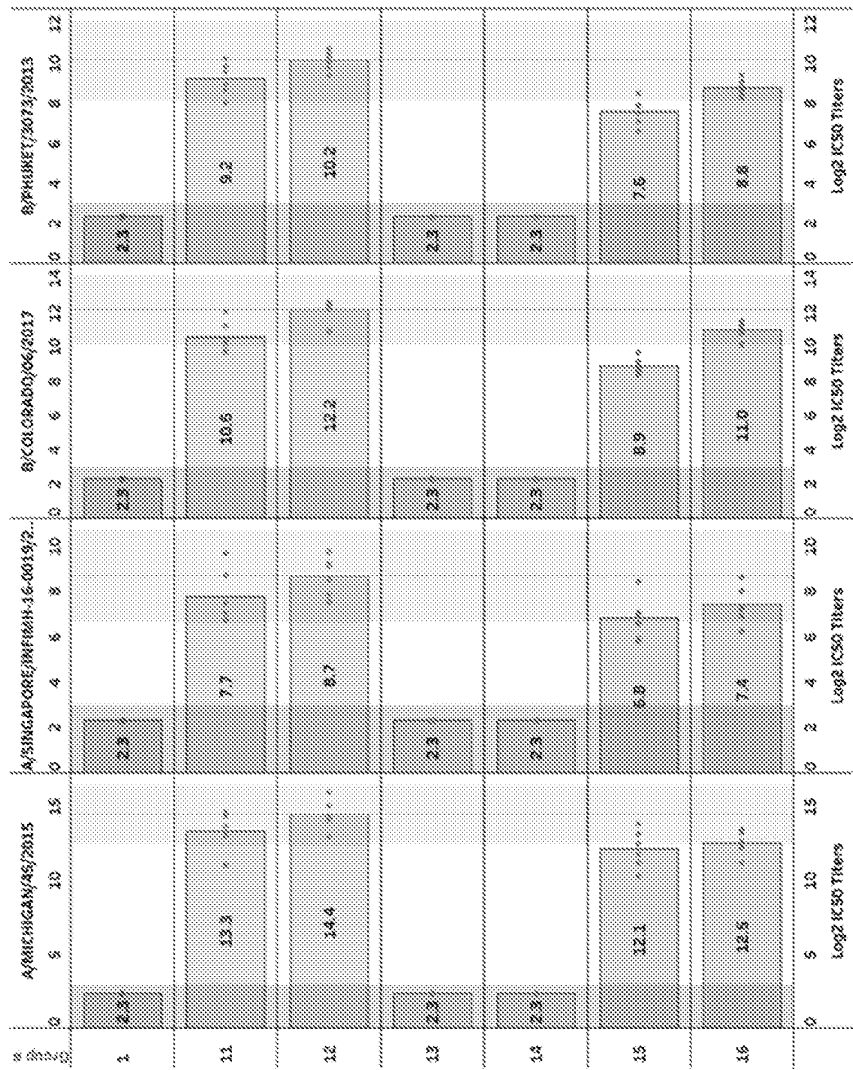


FIG. 33