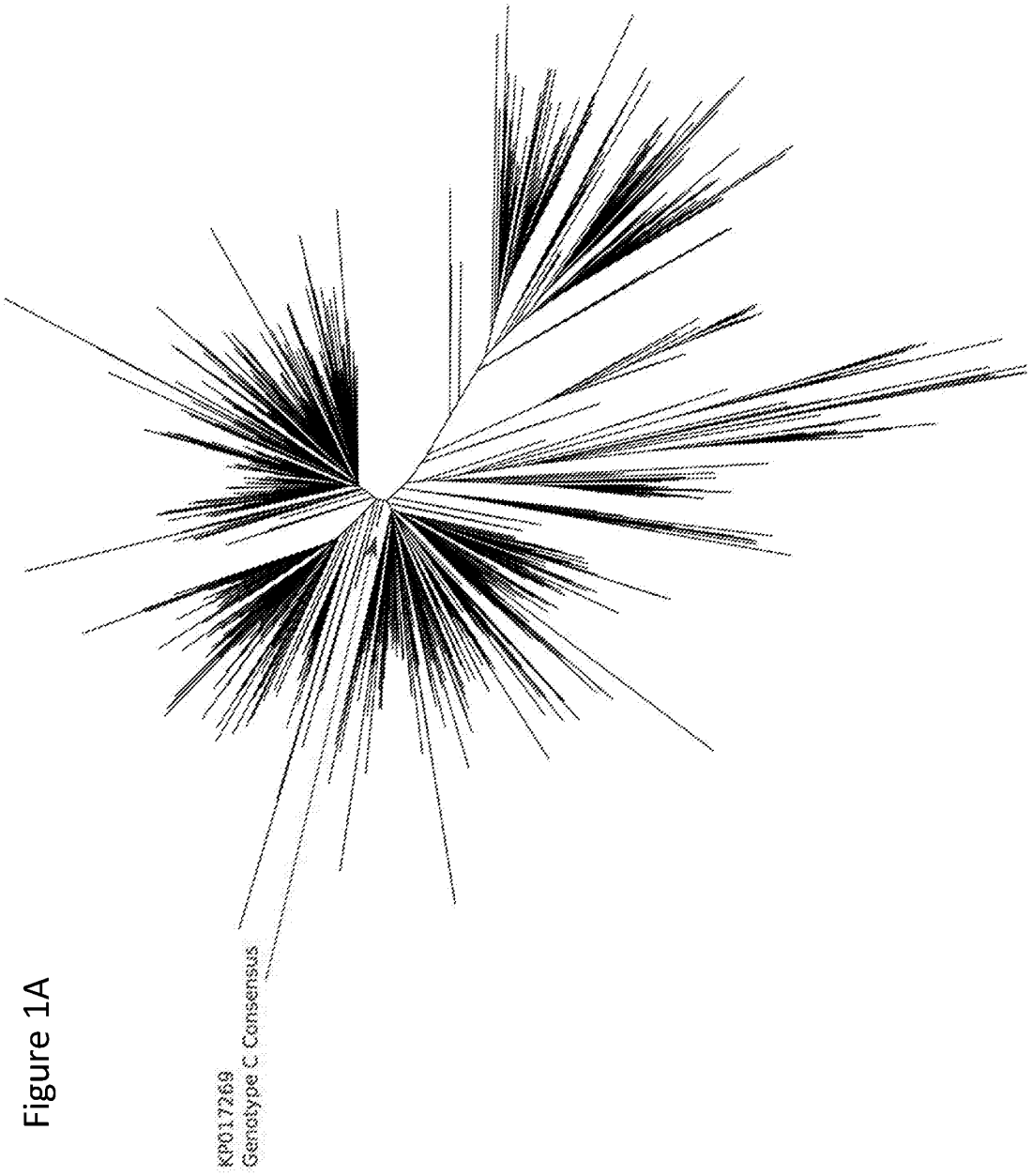



Figure 1A

**Figure 1B...**

genotype C consensus:
7269.1 HBV isolate JP-02:
acaacattccaccaagctctgctagatccagagtgagggggcctatactttcctgctggtggctccagttccggaacagtaaacctgttccgacta
tcacccatatcgtcaatcttctcgagggactgggacccctgcaccgaacatggagaacacaacatcaggattcctaggacccctgctcgtgttacagg
ttttcttgttgacaagaatcctcacaataccacagagtctagactcgtggtggacttctctcaattttctagggggagcacccaccagtgtcctggcc
tcgcagtcccccaacctccaatcactcaccaacctcttgtcctccaatttgtcctggctatcgctggatgtgtctgcggcgttttatcatattcctct
ctgctgctatgcctcatcttcttgttggttctttctggactaccaagatatgttgcccgtttgtcctctacttccaggaacatcaacttaccagcacgg
tgcaagacctgcacgattcctgctcaaggaacctctatgttccctcttgttgctgtacaaaaccttcggacggaaactgcactgtattcccatcc
tcctgggcttccgcaagattcctatgggagtgggcctcagtccgttctcctggctcagtttactagtggccattgttcagtggttcgtagggcttt
actgtttggcttcagttatatggatgatgtggtattgggggccaagtctgtacaacatcttgagtccctttttacctctattaccaatttcttttt
tgggtatacatttgaaccctaataaaaccaaacgttgggctactcccttaacttcatgggatatgtaattggaagtcatttaccacagga
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**Figure 1B continued**

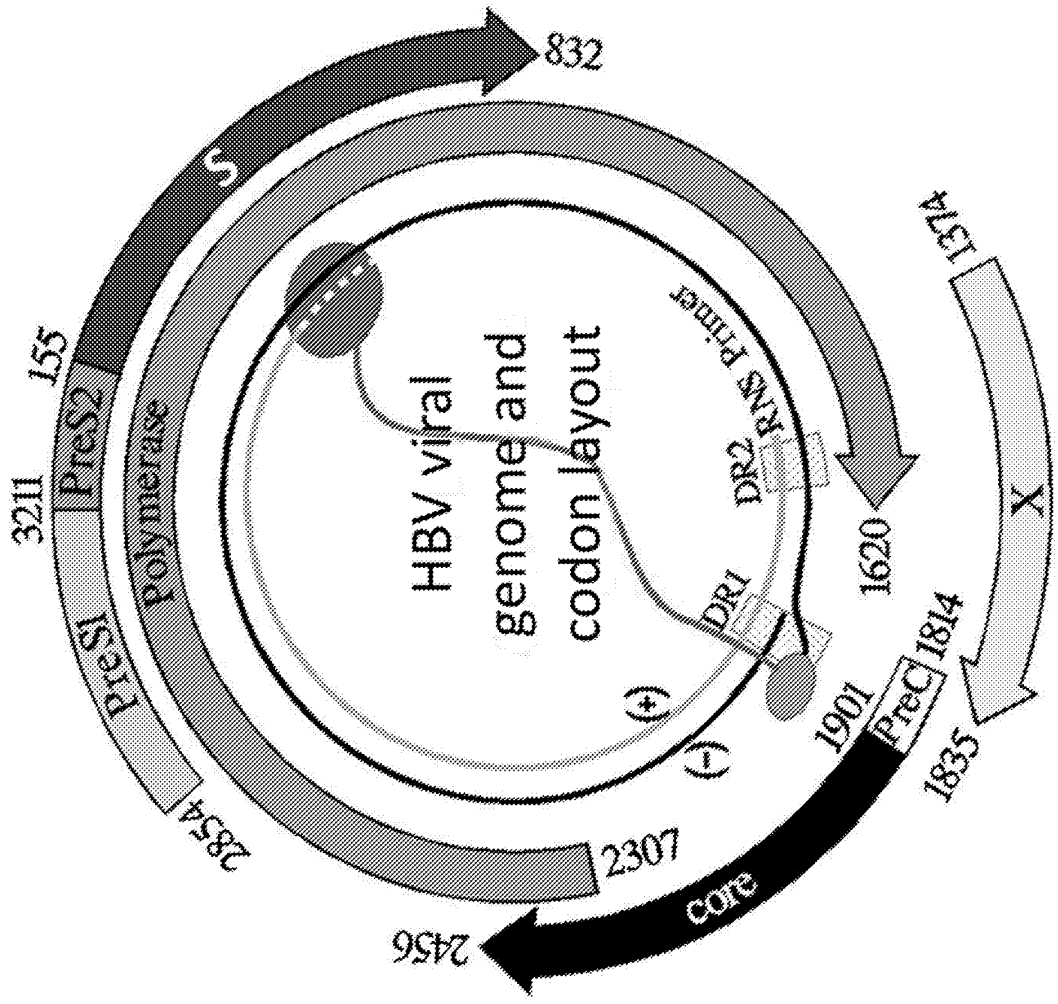

HBV viral genome and codon layout
S
832
1374
X
1835
core
2456
PreC
1814
1901
PreS1
2854
PreS2
155
3211
Polymerase
2307
RNS Primer
DR2
DR1
1620
(+)
(-)

Figure 2A

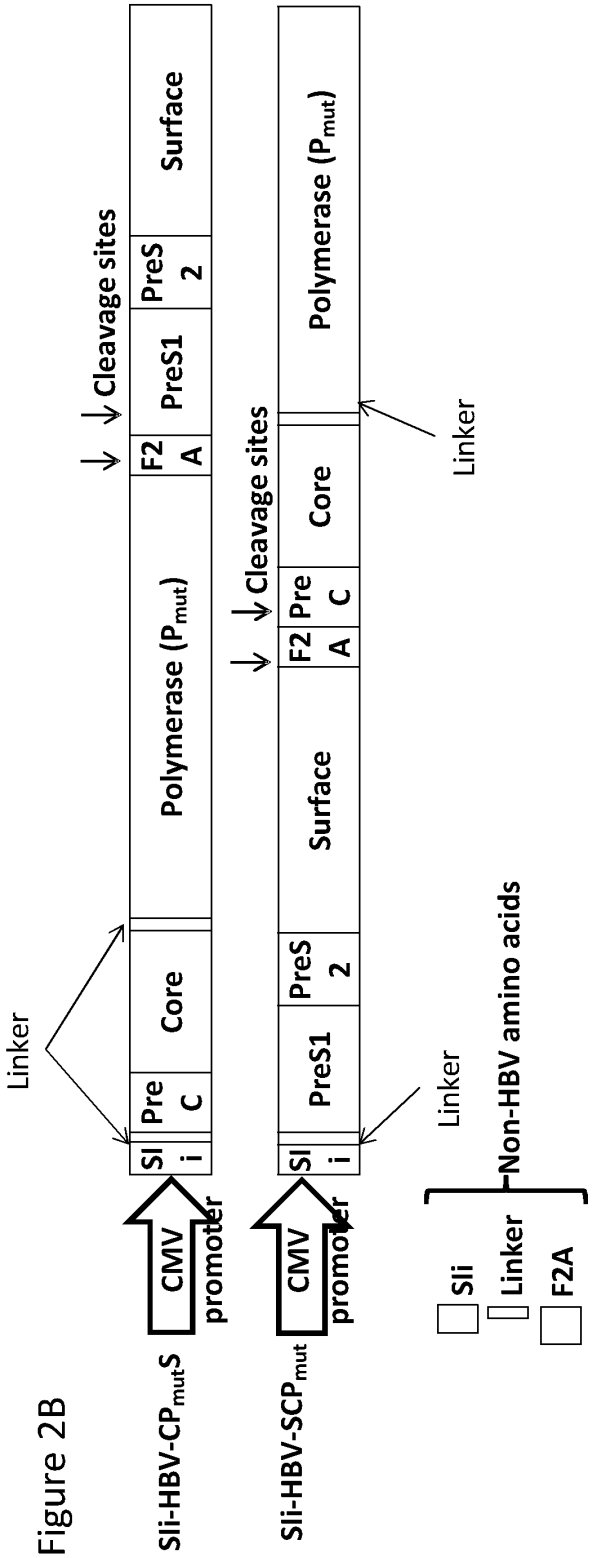

Sli-HBV-CP$_{mut}$S
CMV promoter
Sli
Pre C
Core
Linker
Polymerase (P$_{mut}$)
F2A
Cleavage sites
PreS1
PreS2
Surface
Sli-HBV-SCP$_{mut}$
CMV promoter
Sli
PreS1
PreS2
Surface
F2A
Pre C
Cleavage sites
Core
Linker
Polymerase (P$_{mut}$)
Linker
Sli
Linker
F2A
Non-HBV amino acids

Figure 2B

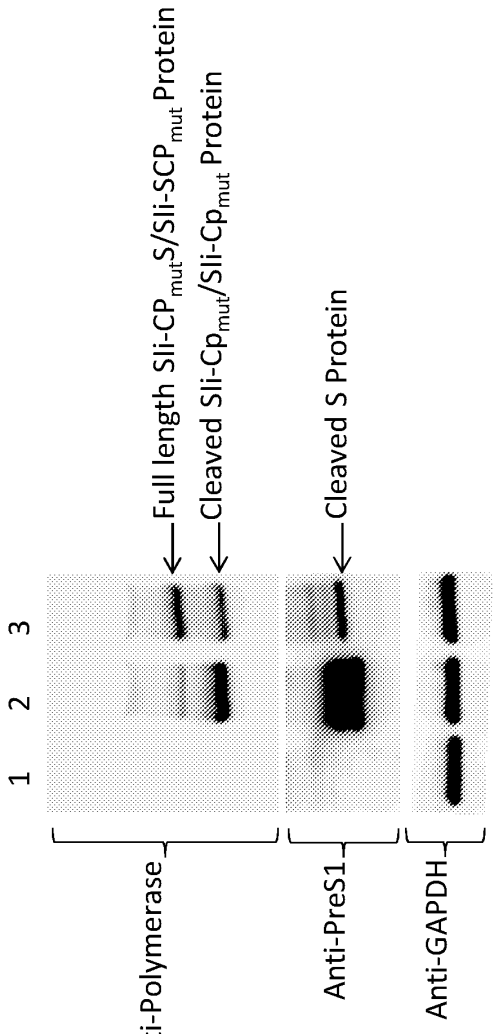

Full length Sli-CP$_{mut}$S/Sli-SCP$_{mut}$ Protein
Cleaved Sli-Cp$_{mut}$/Sli-Cp$_{mut}$ Protein
Cleaved S Protein
1
2
3
Anti-Polymerase
Anti-PreS1
Anti-GAPDH

Figure 2C

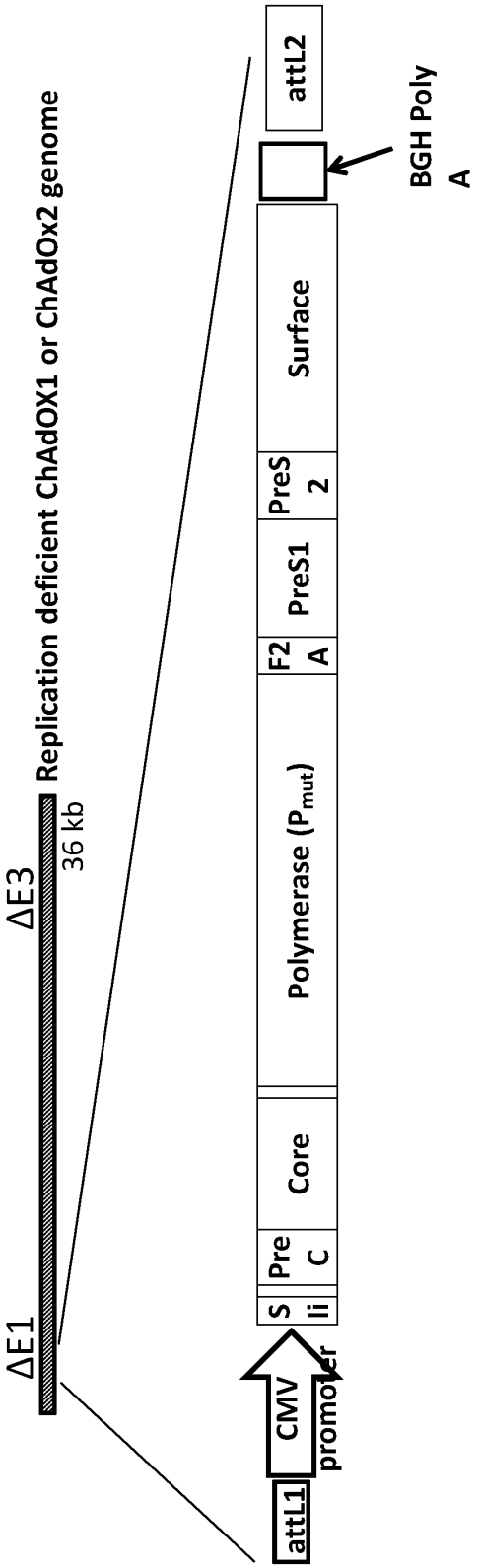

Replication deficient ChAdOX1 or ChAdOx2 genome
36 kb
ΔE3
ΔE1
attL1
CMV promoter
S li
Pre C
Core
Polymerase (Pmut)
F2 A
PreS1
PreS 2
Surface
BGH Poly A
attL2

Figure 2D

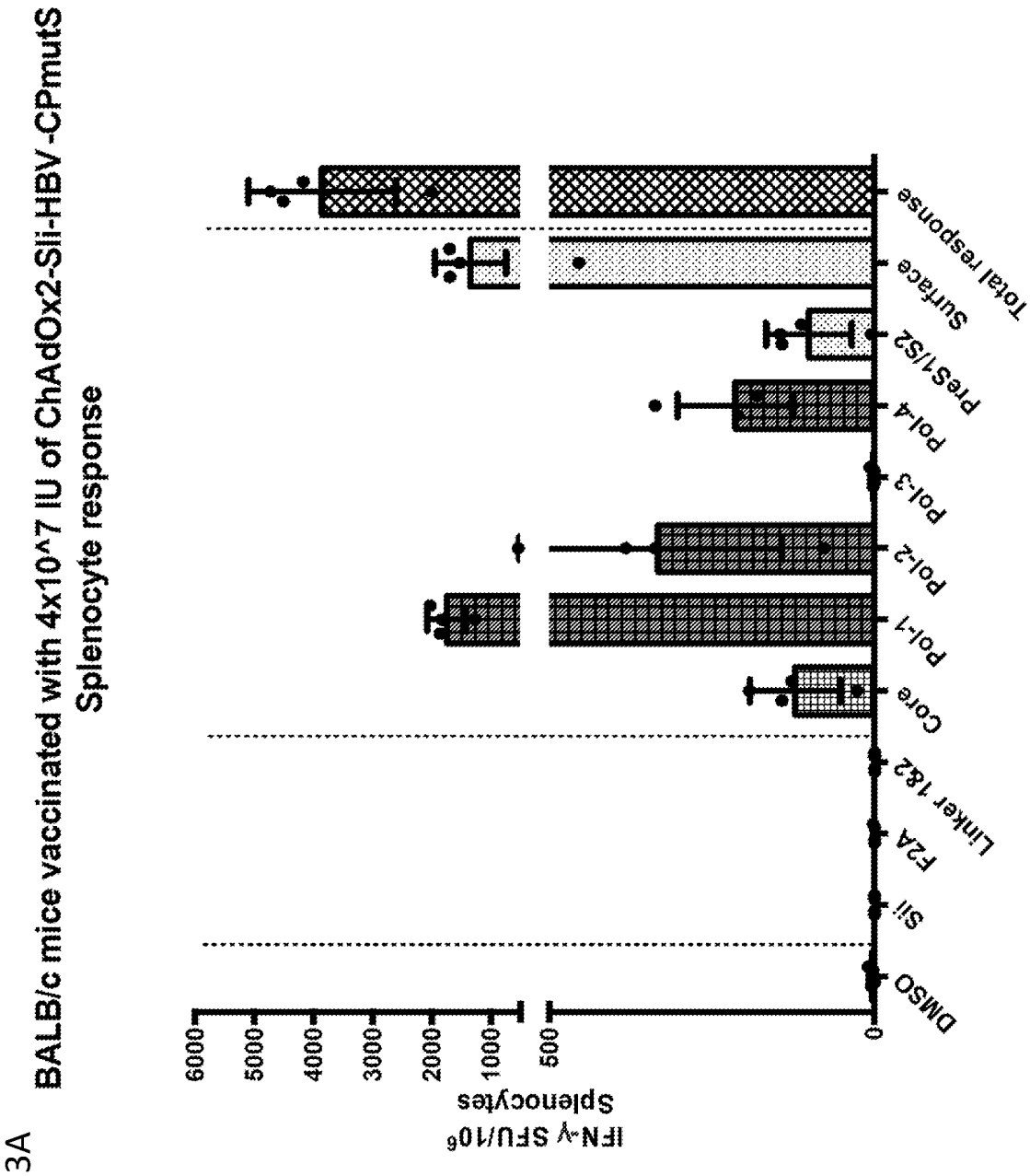

BALB/c mice vaccinated with 4x10^7 IU of ChAdOx2-Sli-HBV-CPmutS
Splenocyte response
IFN-γ SFU/10^6 Splenocytes
6000
5000
4000
3000
2000
1000
500
0
DMSO
Sli
F2A
Linker 1&2
Core
Pol-1
Pol-2
Pol-3
Pol-4
PreS1/S2
Surface
Total response

Figure 3A

Figure 3B

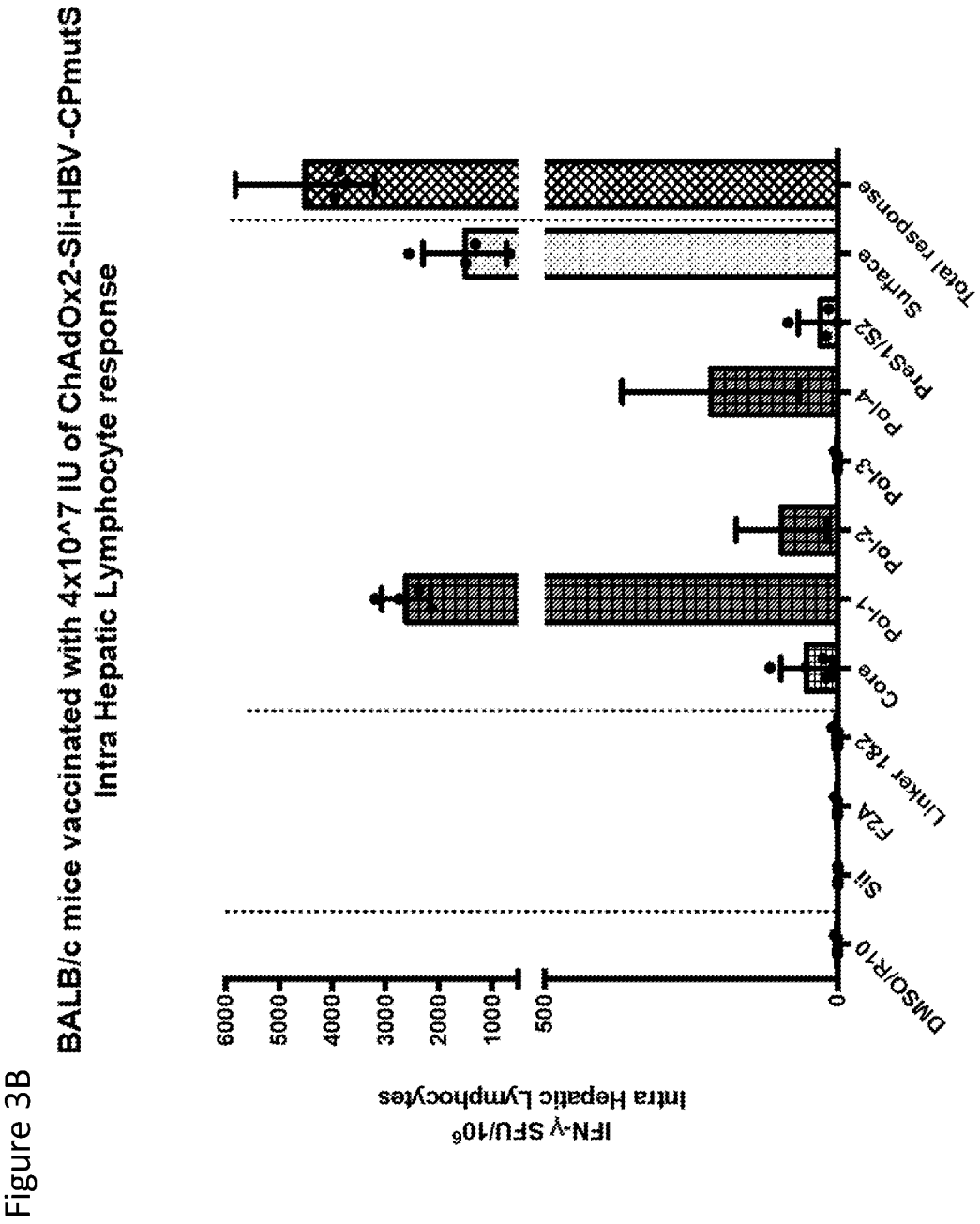
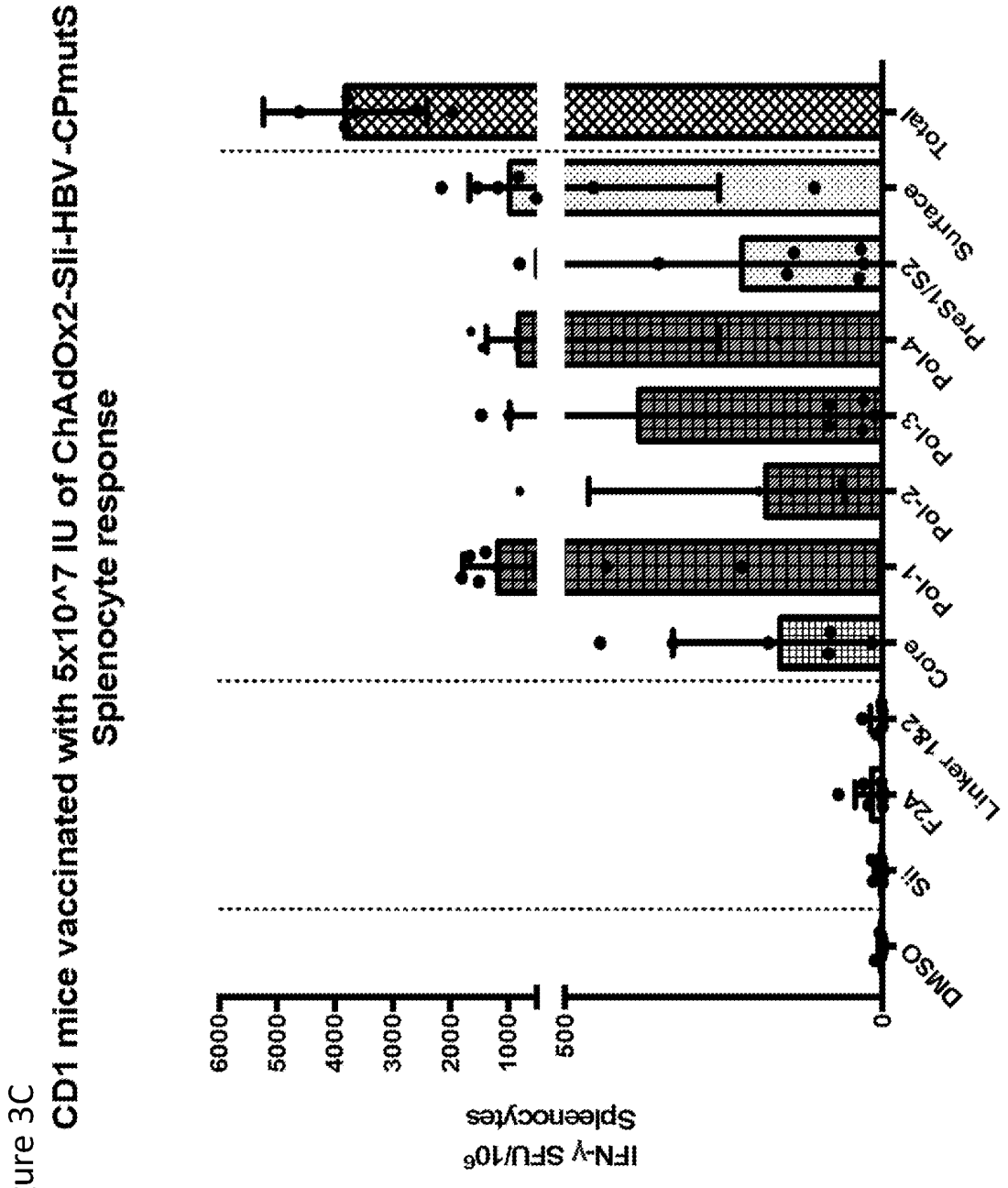

BALB/c mice vaccinated with 4x10^7 IU of ChAdOx2-Sli-HBV-CPmutS
Intra Hepatic Lymphocyte response
IFN-γ SFU/10^6
Intra Hepatic Lymphocytes
6000
5000
4000
3000
2000
1000
500
0
DMSO/R10
Sli
F2A
Linker 1&2
Core
Pol-1
Pol-2
Pol-3
Pol-4
PreS1/S2
Surface
Total response

Figure 3C


CD1 mice vaccinated with 5x10^7 IU of ChAdOx2-Sli-HBV-CPmutS
Splenocyte response
IFN-γ SFU/10^6 Splenocytes
6000
5000
4000
3000
2000
1000
500
0
DMSO
Sli
F2A
Linker 1&2
Core
Pol-1
Pol-2
Pol-3
Pol-4
PreS1/S2
Surface
Total

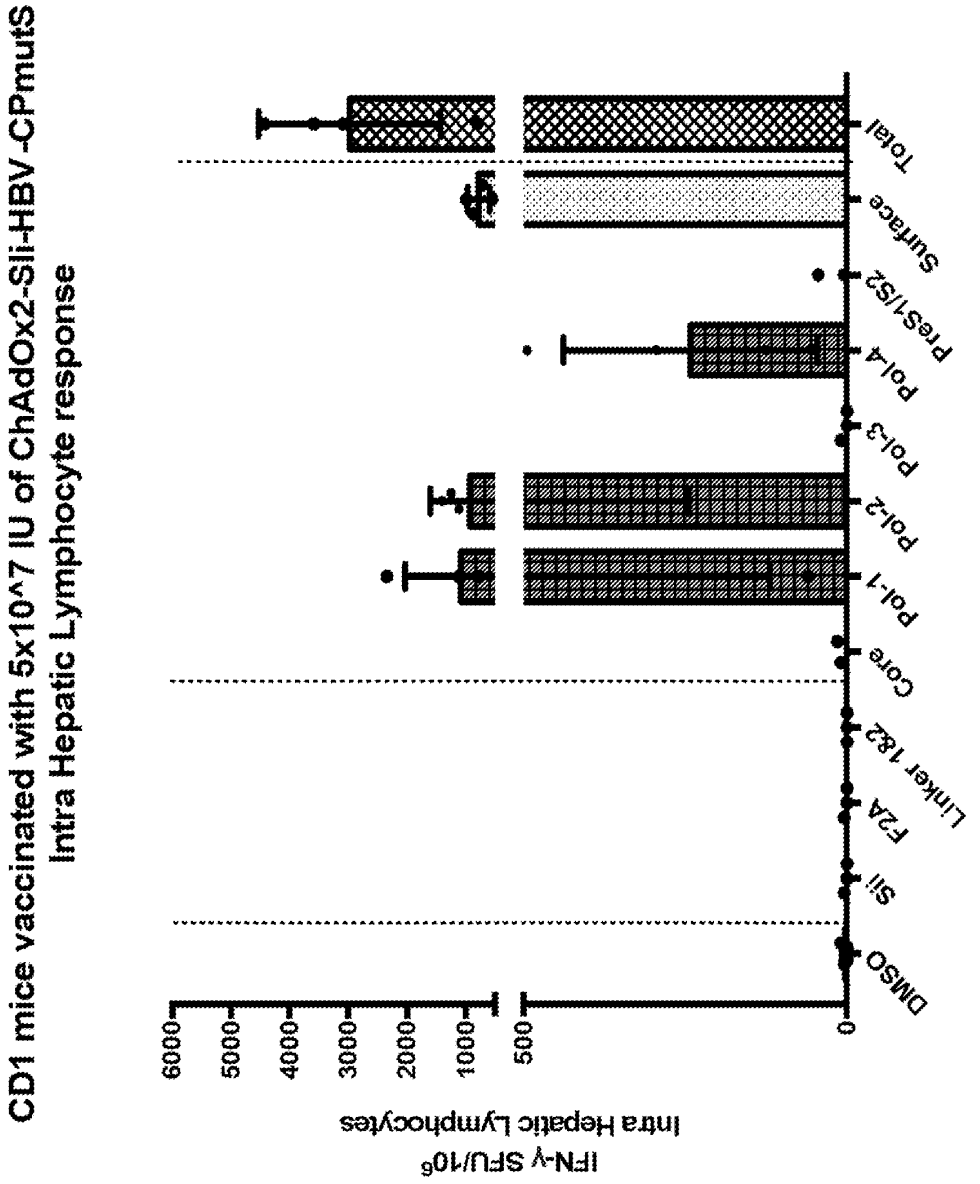

CD1 mice vaccinated with 5x10^7 IU of ChAdOx2-Sli-HBV-CPmutS
Intra Hepatic Lymphocyte response
IFN-γ SFU/10^6
Intra Hepatic Lymphocytes
6000
5000
4000
3000
2000
1000
500
0
DMSO
Sli
F2A
Linker 1&2
Core
Pol-1
Pol-2
Pol-3
Pol-4
PreS1/S2
Surface
Total

Figure 3D

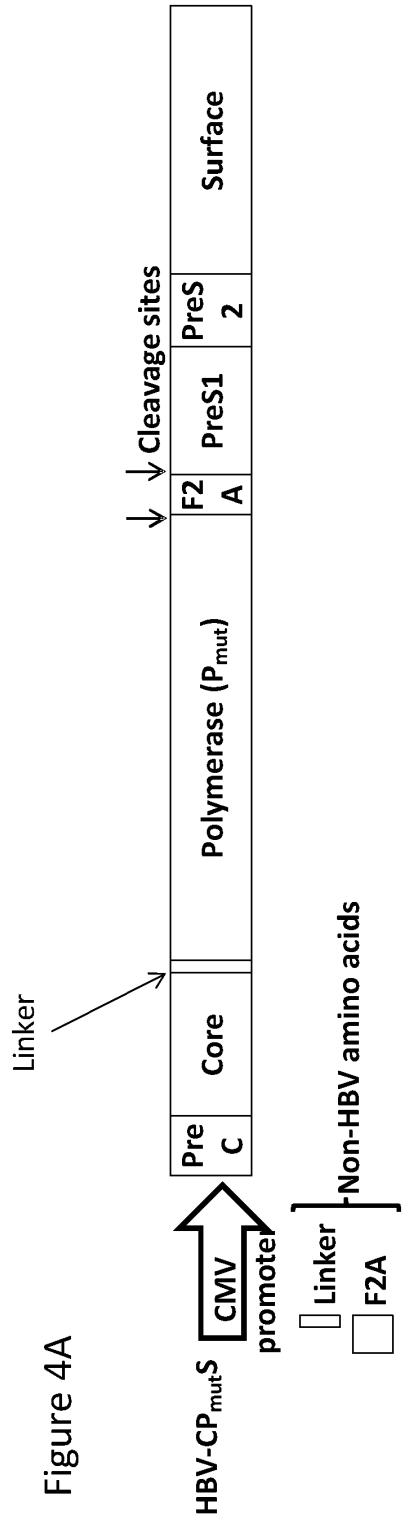

HBV-CP$_{mut}$S
CMV promoter
Pre C
Core
Linker
Polymerase (P$_{mut}$)
Cleavage sites
F2 A
PreS1
PreS 2
Surface
Linker
F2A
Non-HBV amino acids

Figure 4A

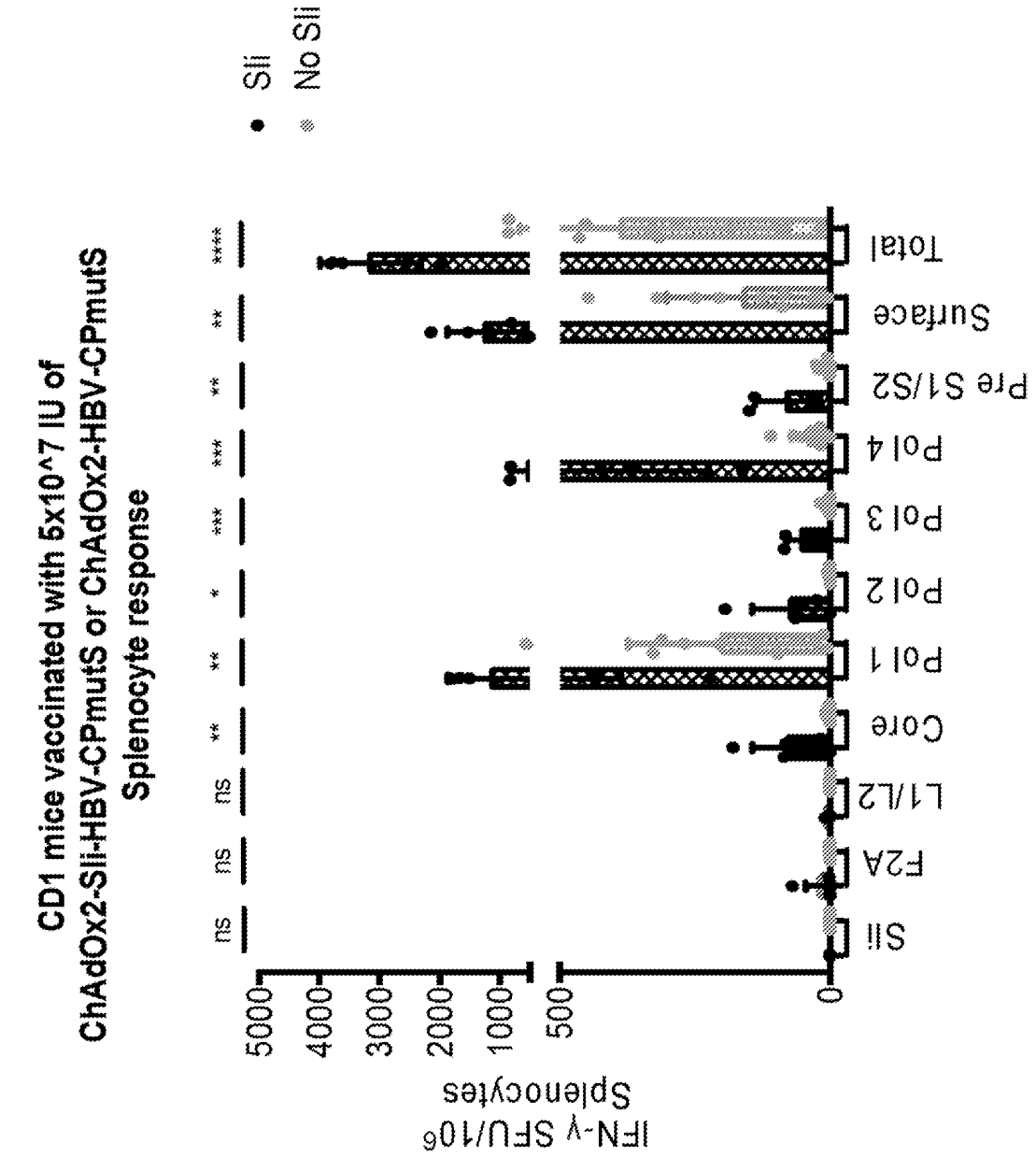

CD1 mice vaccinated with 5x10^7 IU of
ChAdOx2-Sli-HBV-CPmutS or ChAdOx2-HBV-CPmutS
Splenocyte response
Sli
No Sli
IFN-γ SFU/10^6 Splenocytes
5000
4000
3000
2000
1000
500
0
ns
ns
ns
**
**
*
***
***
**
**
****
Sli
F2A
L1/L2
Core
Pol 1
Pol 2
Pol 3
Pol 4
Pre S1/S2
Surface
Total

Figure 4B

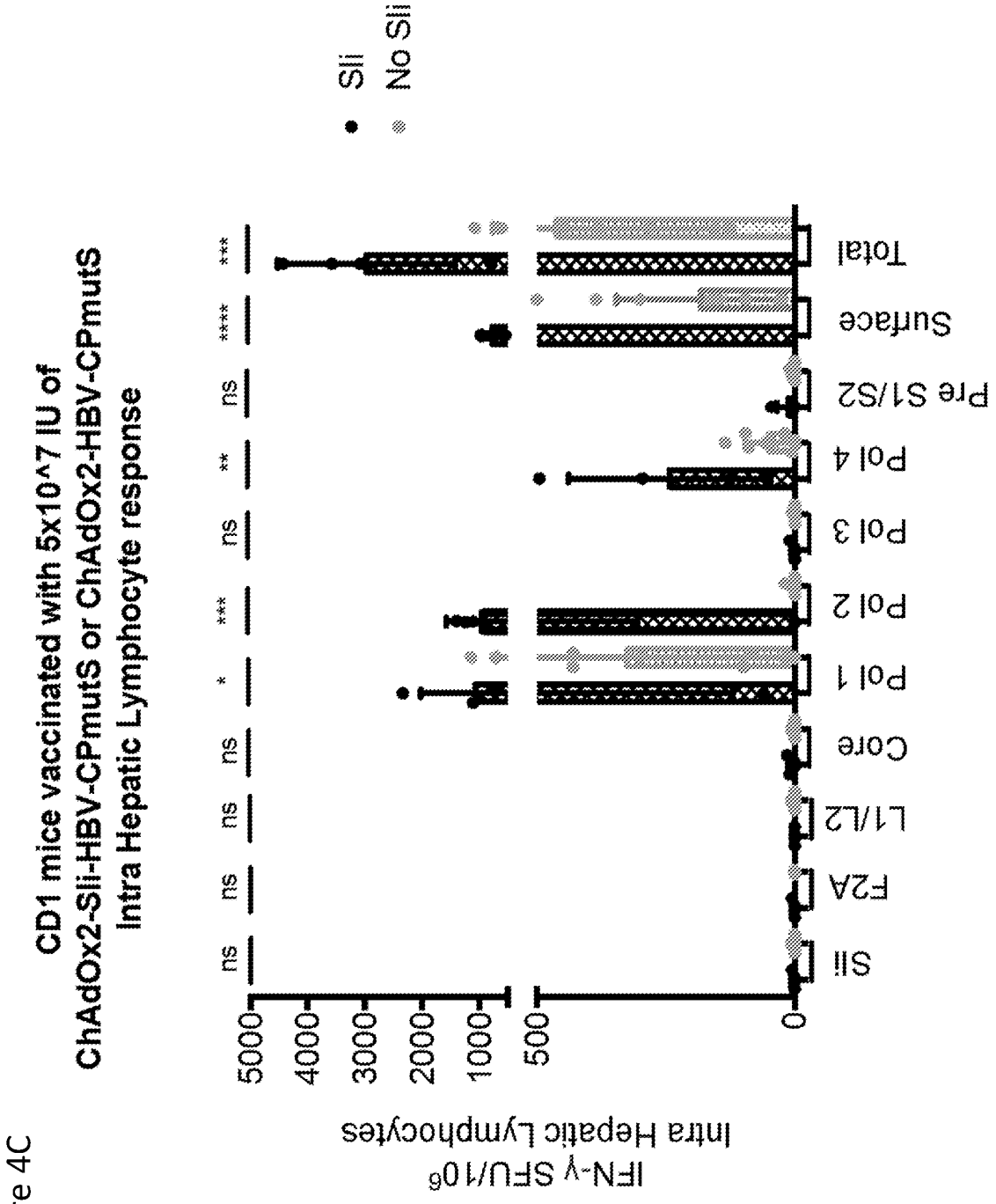

CD1 mice vaccinated with 5x10^7 IU of
ChAdOx2-Sli-HBV-CPmutS or ChAdOx2-HBV-CPmutS
Intra Hepatic Lymphocyte response
IFN-γ SFU/10^6
Intra Hepatic Lymphocytes
Sli
No Sli
0
500
1000
2000
3000
4000
5000
Sli
F2A
L1/L2
Core
Pol 1
Pol 2
Pol 3
Pol 4
Pre S1/S2
Surface
Total
ns
ns
ns
ns
*
***
ns
**
ns
****
***

Figure 4C

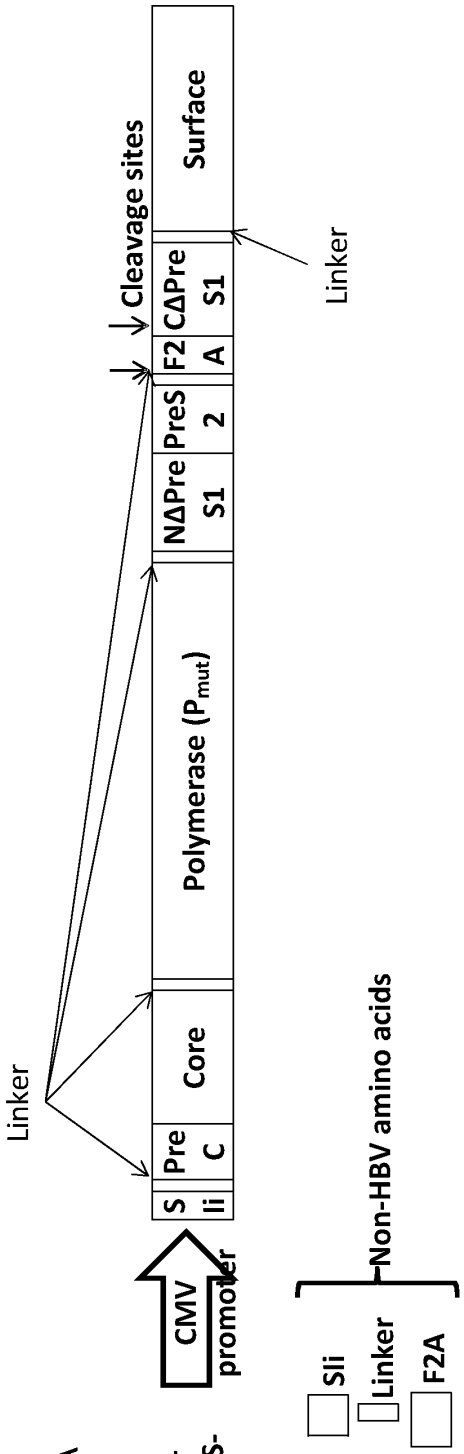



Figure 5A

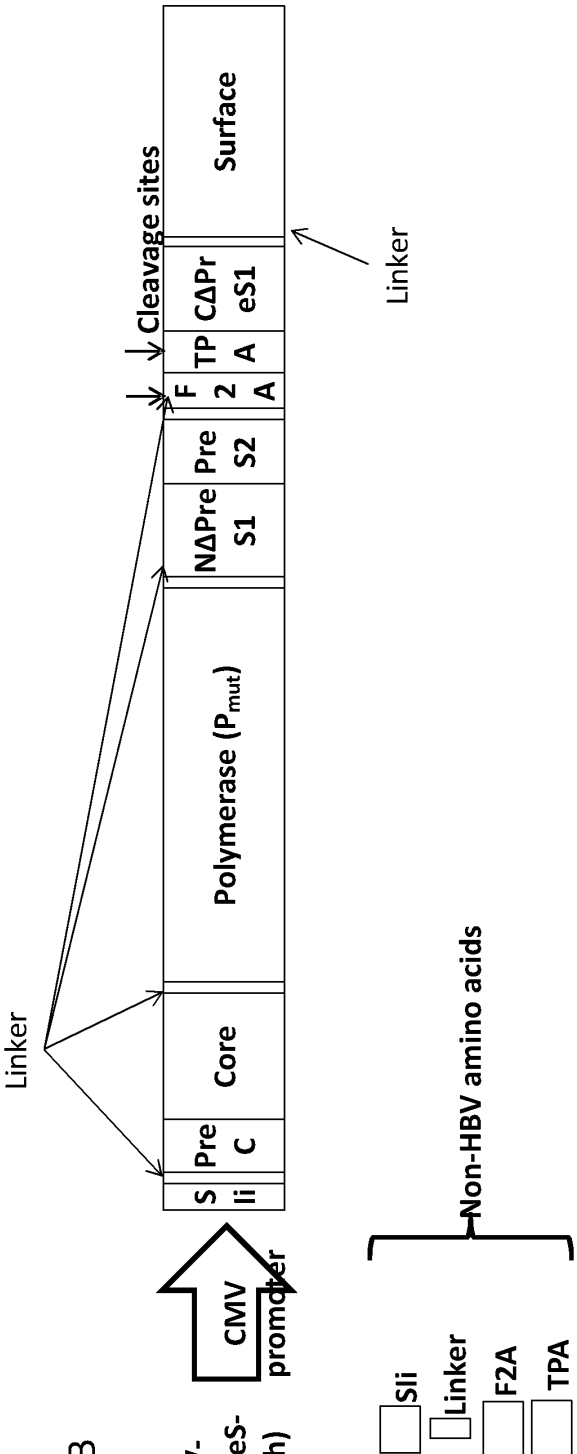



Figure 5B

Figure 6A

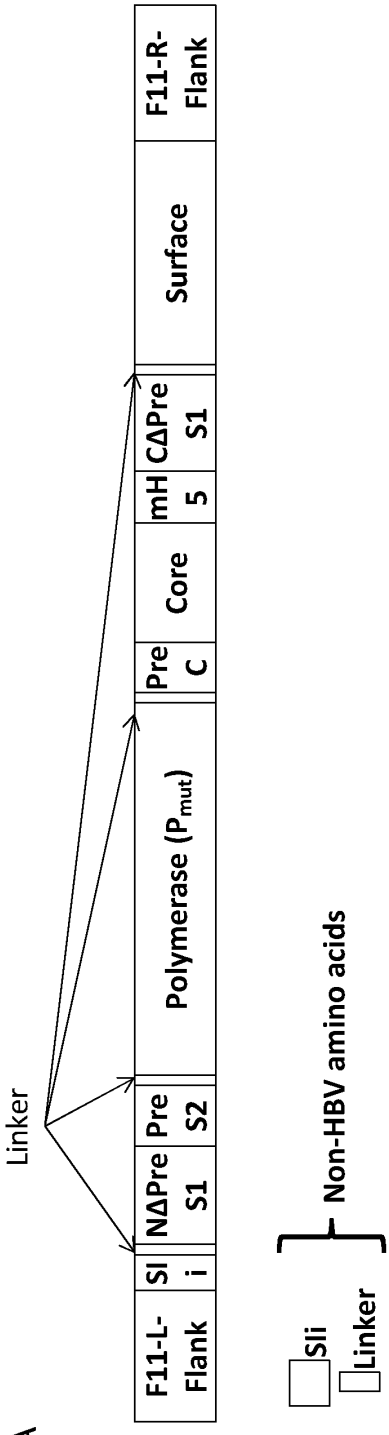



Figure 6B

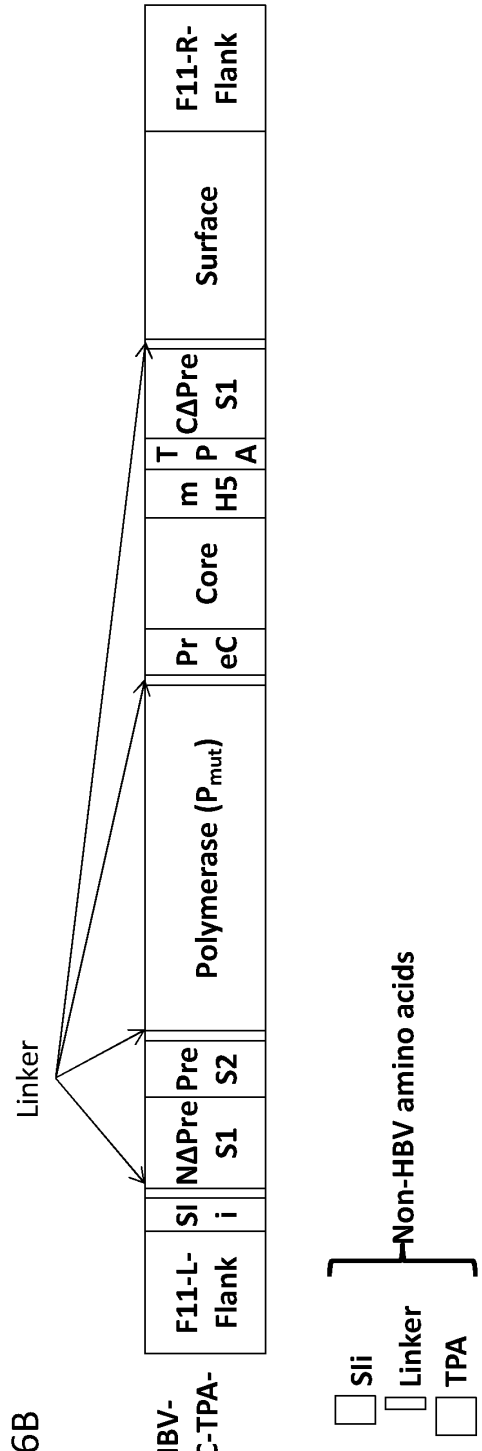


Figure 7

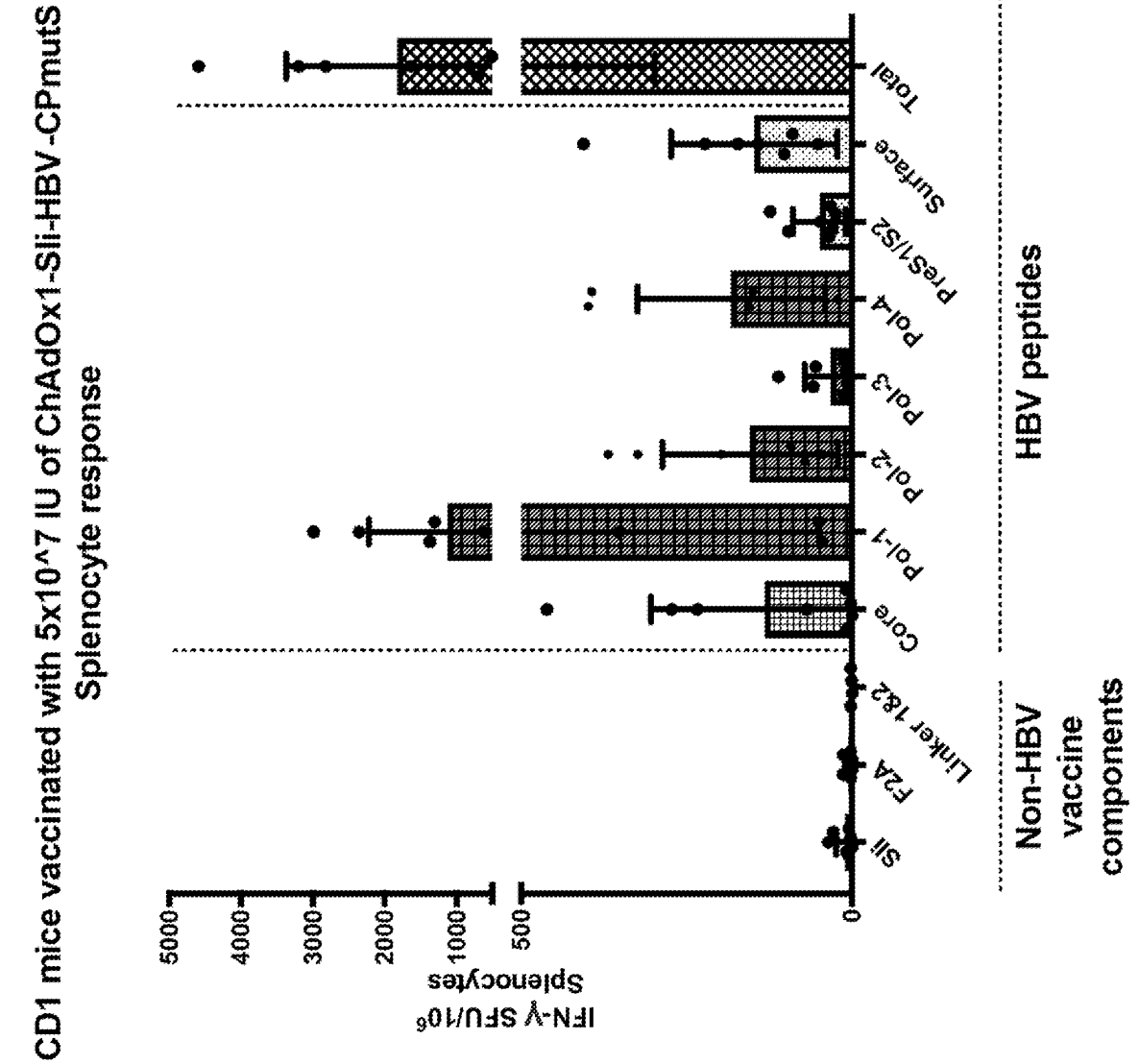

CD1 mice vaccinated with 5x10^7 IU of ChAdOx1-Sli-HBV-CPmutS
Splenocyte response
IFN-γ SFU/10^6 Splenocytes
5000
4000
3000
2000
1000
500
0
Sli
F2A
Linker 1&2
Core
Pol-1
Pol-2
Pol-3
Pol-4
PreS1/S2
Surface
Total
Non-HBV vaccine components
HBV peptides

Figure 8

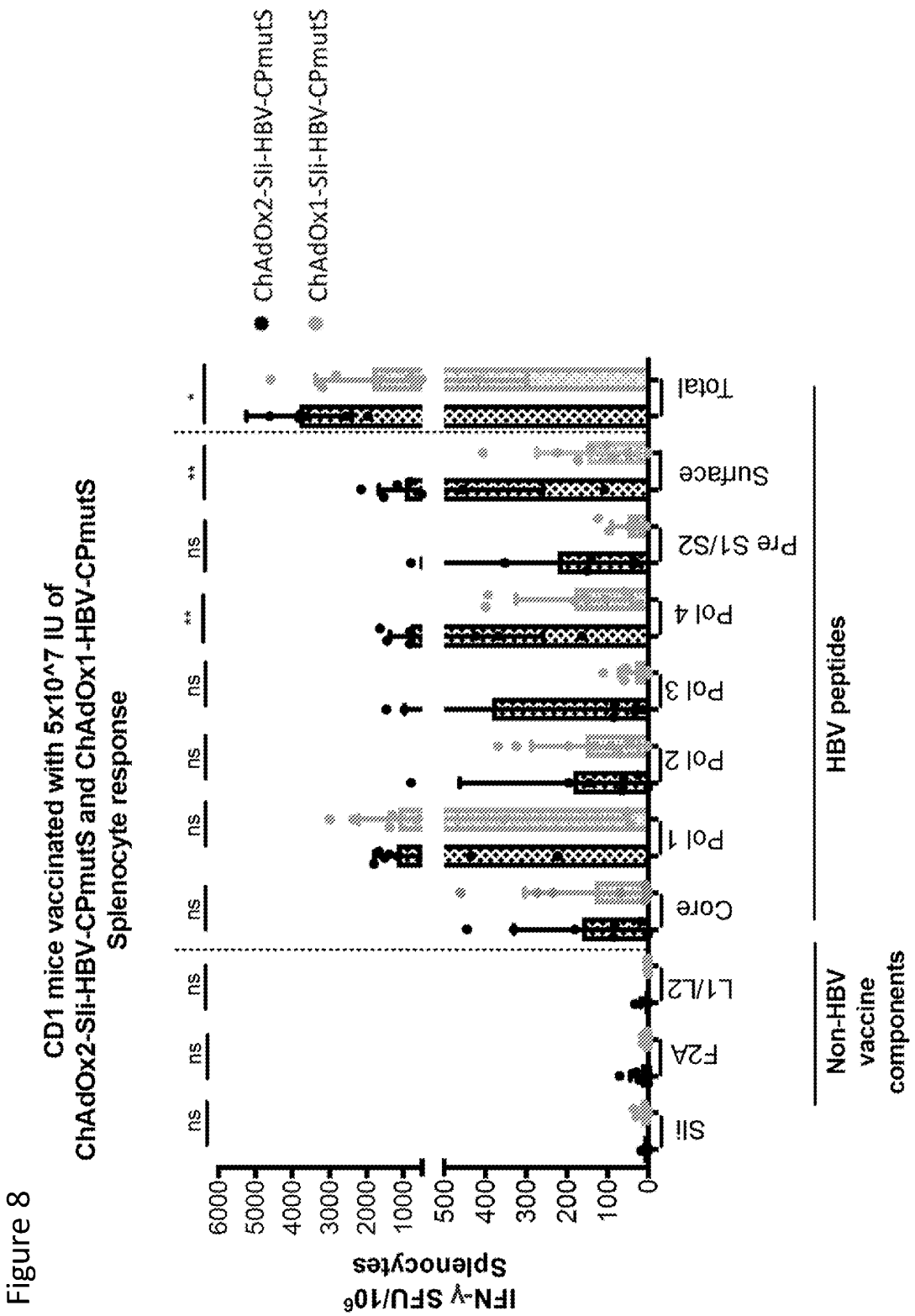
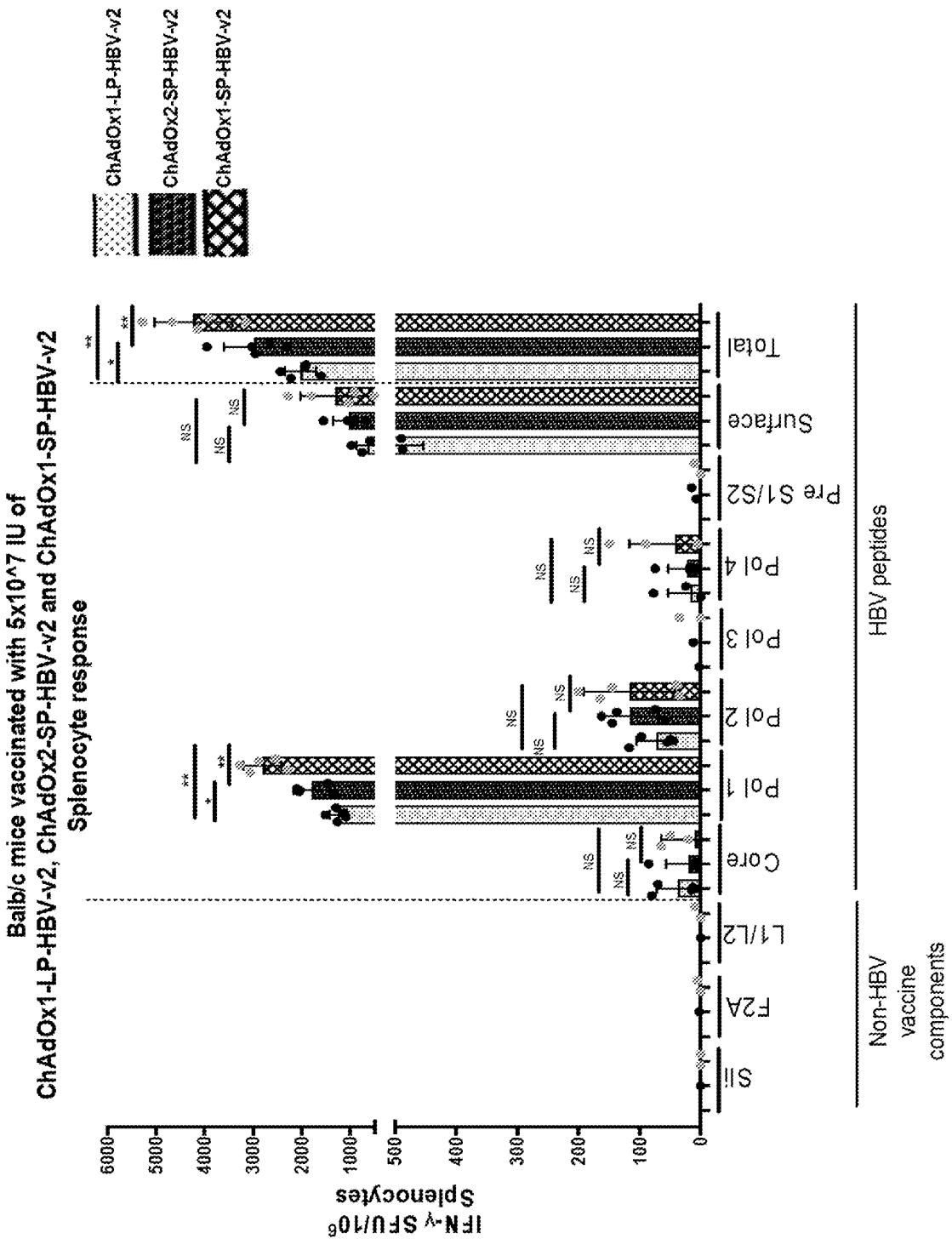

CD1 mice vaccinated with 5x10^7 IU of
ChAdOx2-Sli-HBV-CPmutS and ChAdOx1-HBV-CPmutS
Splenocyte response
ChAdOx2-Sli-HBV-CPmutS
ChAdOx1-Sli-HBV-CPmutS
IFN-γ SFU/10^6 Splenocytes
6000
5000
4000
3000
2000
1000
500
400
300
200
100
0
ns
ns
ns
ns
ns
ns
ns
**
ns
**
*
Sli
F2A
L1/L2
Core
Pol 1
Pol 2
Pol 3
Pol 4
Pre S1/S2
Surface
Total
Non-HBV vaccine components
HBV peptides

Figure 9


ChAdOx1-LP-HBV-v2
ChAdOx2-SP-HBV-v2
ChAdOx1-SP-HBV-v2
Balb/c mice vaccinated with 5x10^7 IU of
ChAdOx1-LP-HBV-v2, ChAdOx2-SP-HBV-v2 and ChAdOx1-SP-HBV-v2
Splenocyte response
IFN-γ SFU/10^6 Splenocytes
6000
5000
4000
3000
2000
1000
500
400
300
200
100
0
NS
*
**
Sli
F2A
L1/L2
Core
Pol 1
Pol 2
Pol 3
Pol 4
Pre S1/S2
Surface
Total
Non-HBV vaccine components
HBV peptides

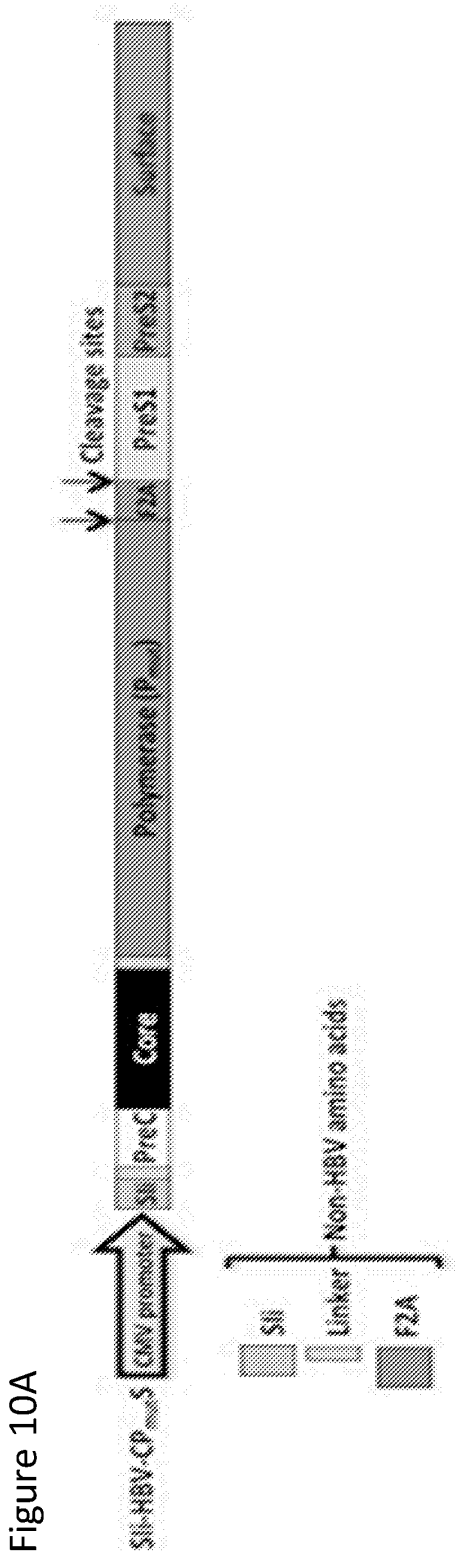



Figure 10A

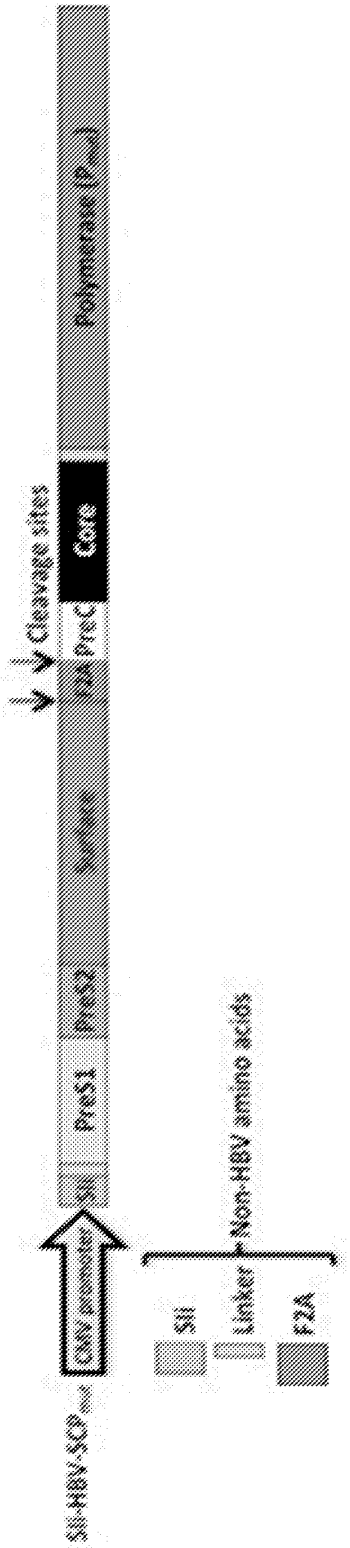



Figure 10B

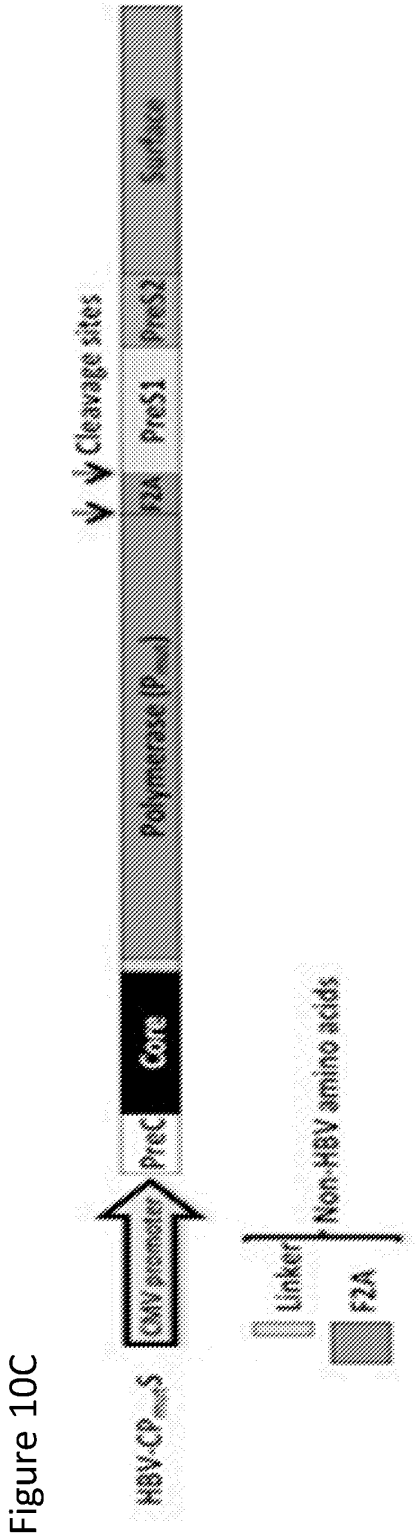



Figure 10C

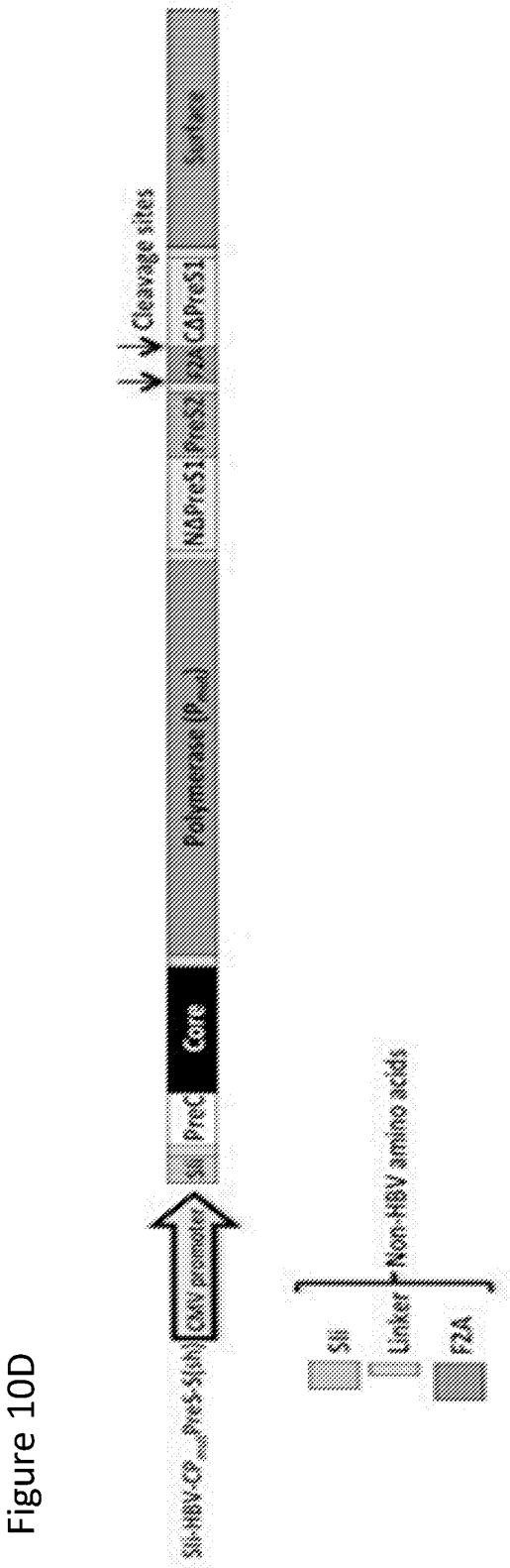



Figure 10D

Figure 10E

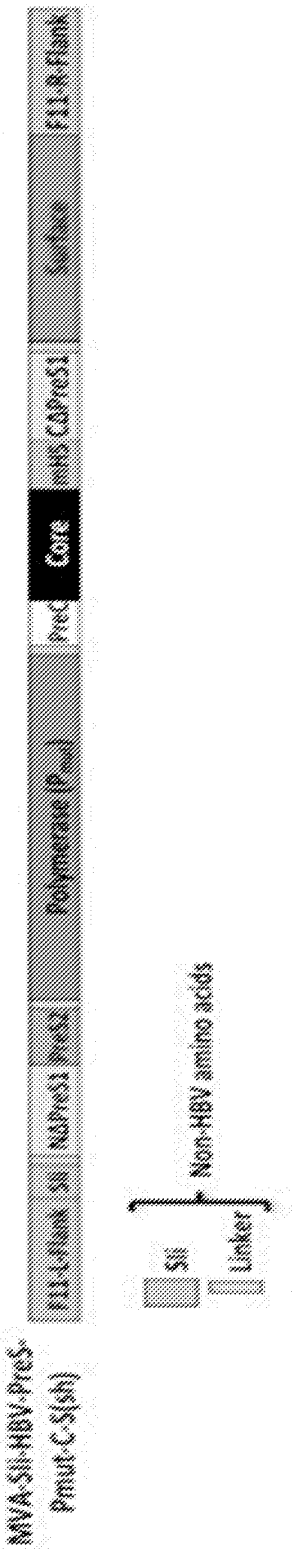
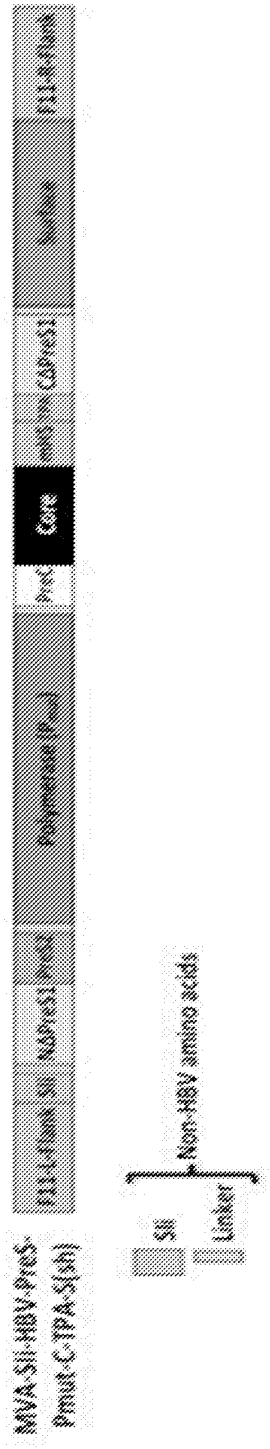



Figure 10F

Figure 10G


MVA-SII-HBV-PreS-Pmut-CTPA-S(sh)
Core
Non-HBV amino acids
SII
Linker