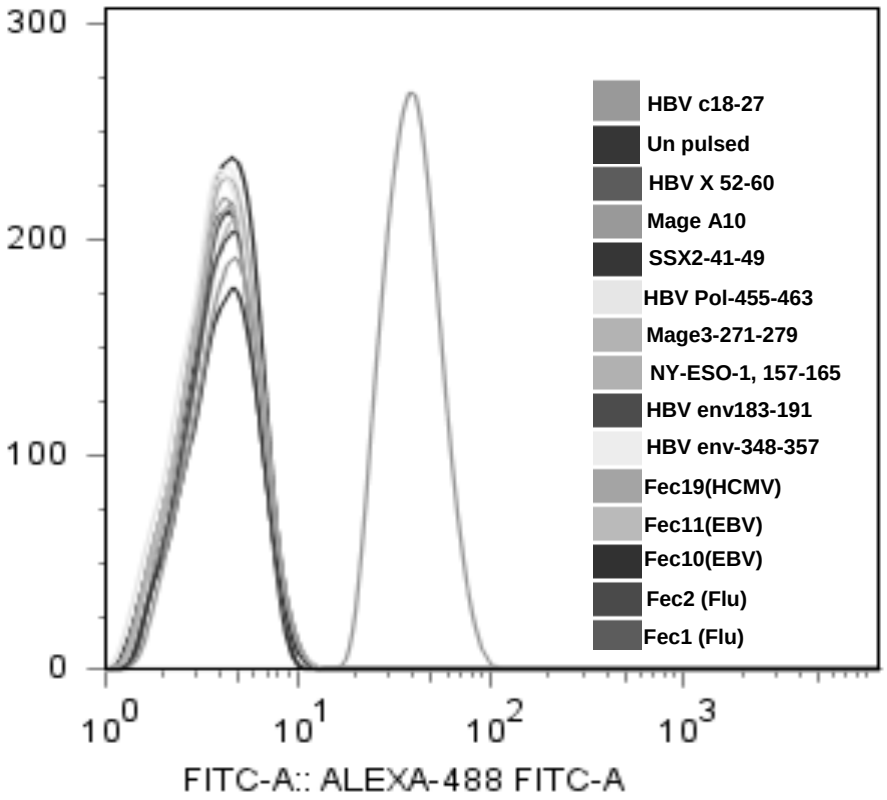
A


300
200
100
0
10^0
10^1
10^2
10^3
FITC-A:: ALEXA-488 FITC-A
HBV c18-27
Un pulsed
HBV X 52-60
Mage A10
SSX2-41-49
HBV Pol-455-463
Mage3-271-279
NY-ESO-1, 157-165
HBV env183-191
HBV env-348-357
Fec19(HCMV)
Fec11(EBV)
Fec10(EBV)
Fec2 (Flu)
Fec1 (Flu)

B

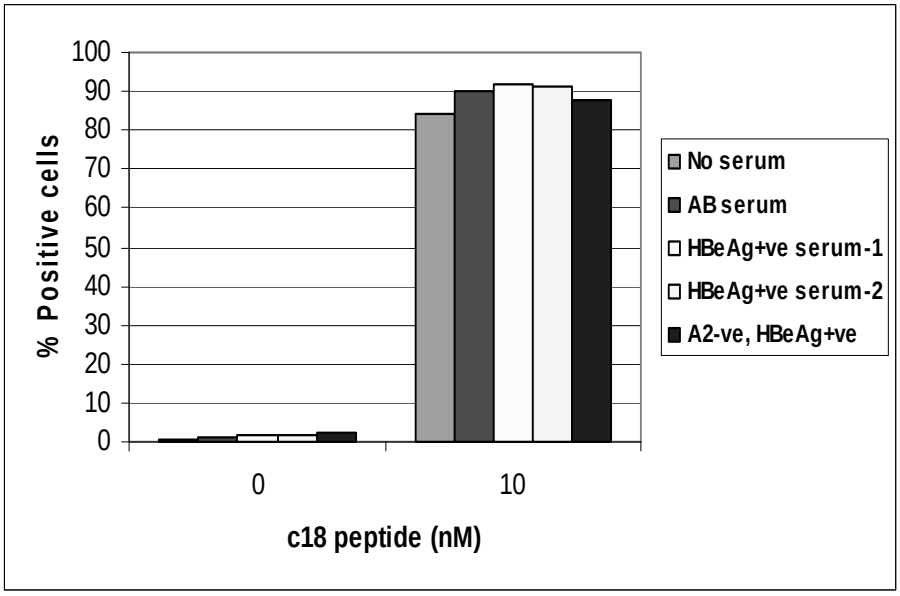
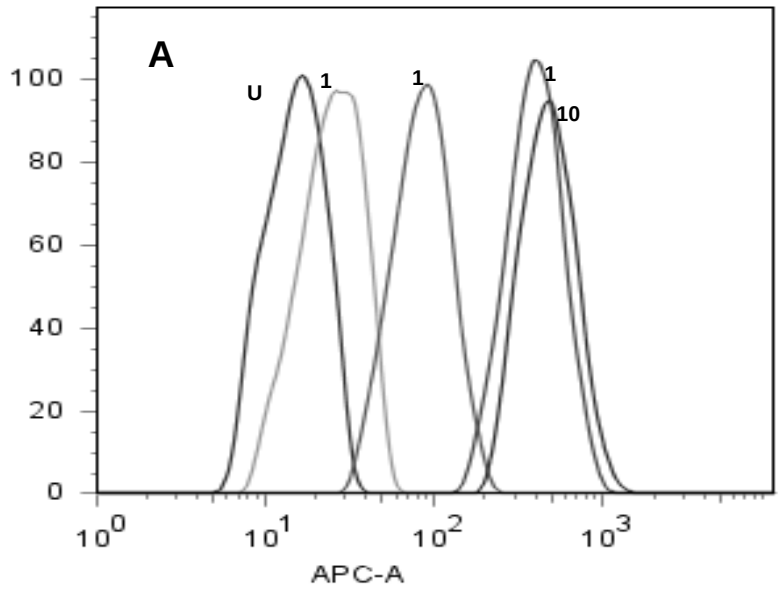
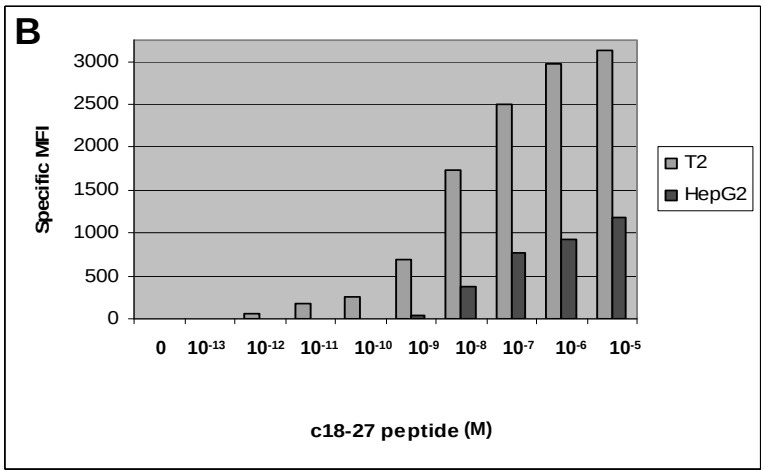

% Positive cells
100
90
80
70
60
50
40
30
20
10
0
0
10
c18 peptide (nM)
No serum
AB serum
HBeAg+ve serum-1
HBeAg+ve serum-2
A2-ve, HBeAg+ve

FIGURE 1


A
U
1
1
1
10
100
80
60
40
20
0
10^0
10^1
10^2
10^3
APC-A


B
Specific MFI
3000
2500
2000
1500
1000
500
0
T2
HepG2
0
10^{-13}
10^{-12}
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
c18-27 peptide (M)

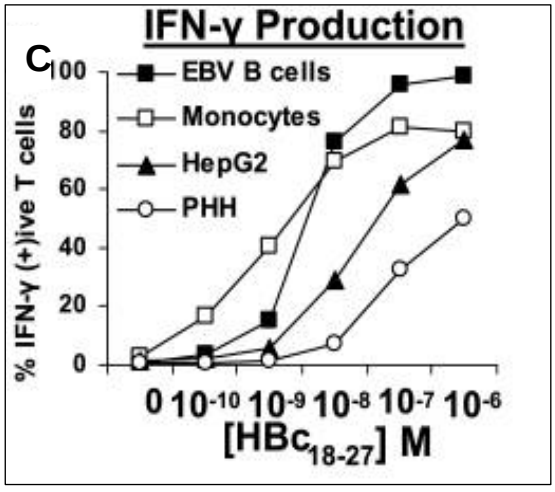

IFN-γ Production
C
EBV B cells
Monocytes
HepG2
PHH
% IFN-γ (+)ive T cells
100
80
60
40
20
0
0 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6}
[HBc_{18-27}] M

FIGURE 2

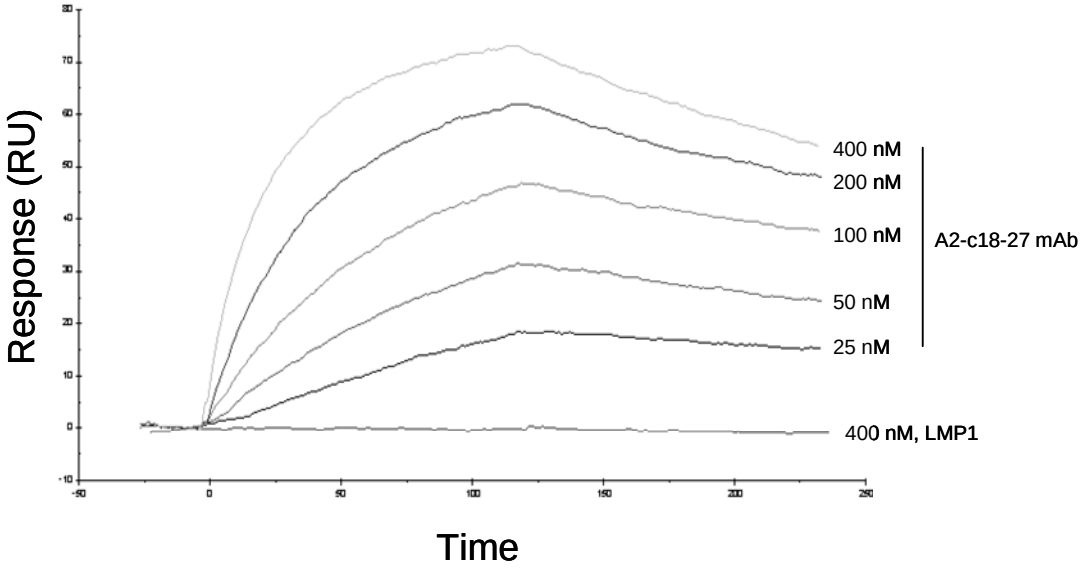


FIGURE 3

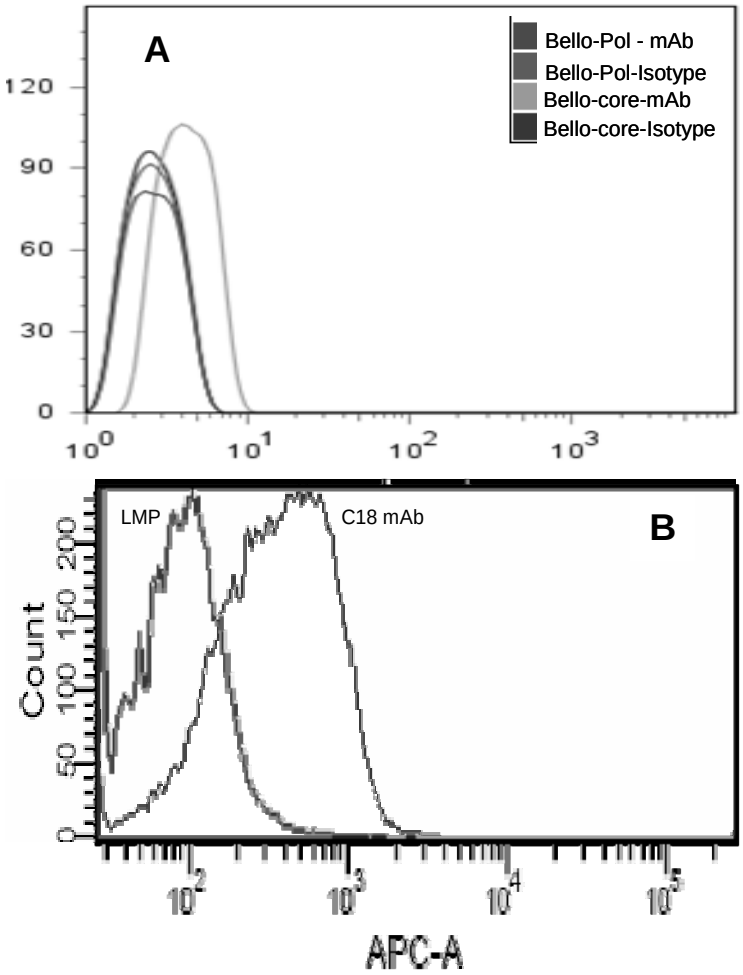


FIGURE 4

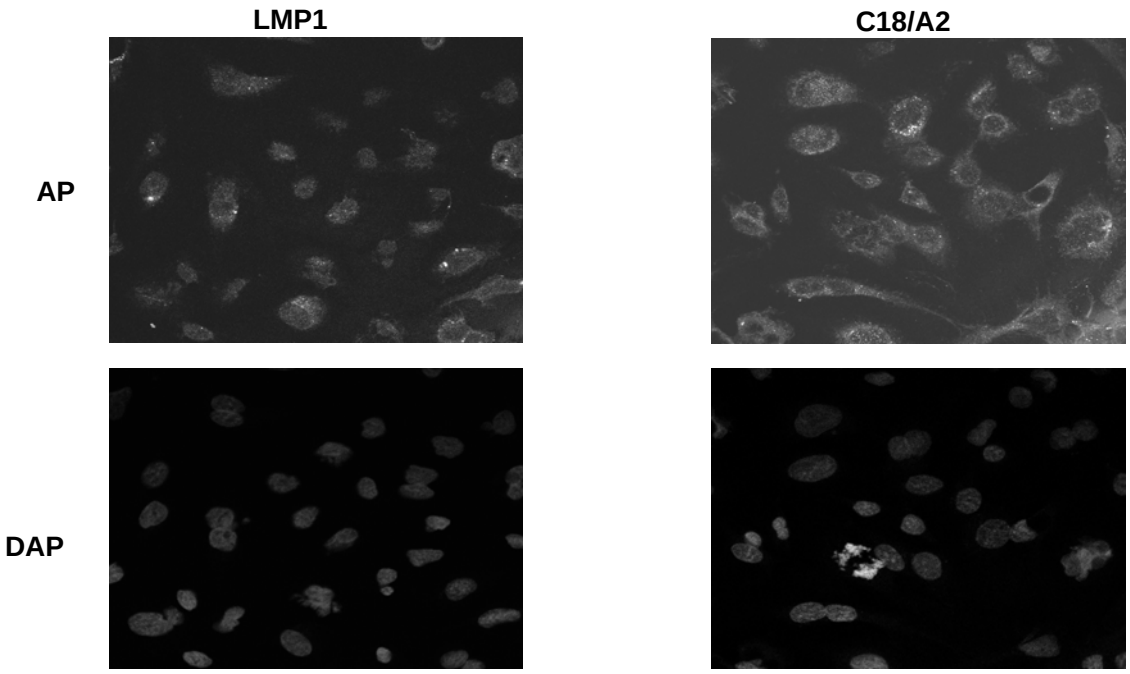


FIGURE 5

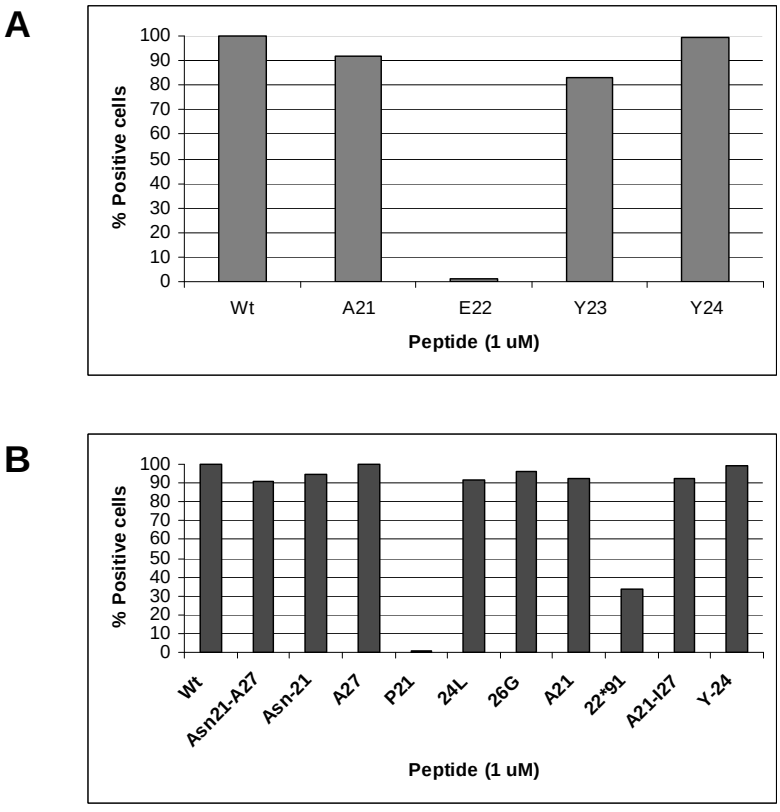
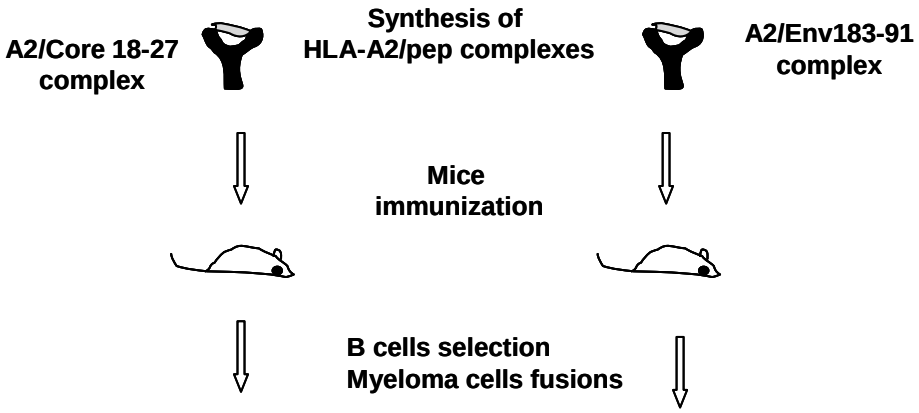


FIGURE 6

A



Ab c18/A2

Total	Negative	HLA-A2 specific	c18/A2 specific
1452	1200	249	3

Ab e183-91/A2

Total	Negative	HLA-A2 specific	e183/A2 specific
2000	1650	348	2

B

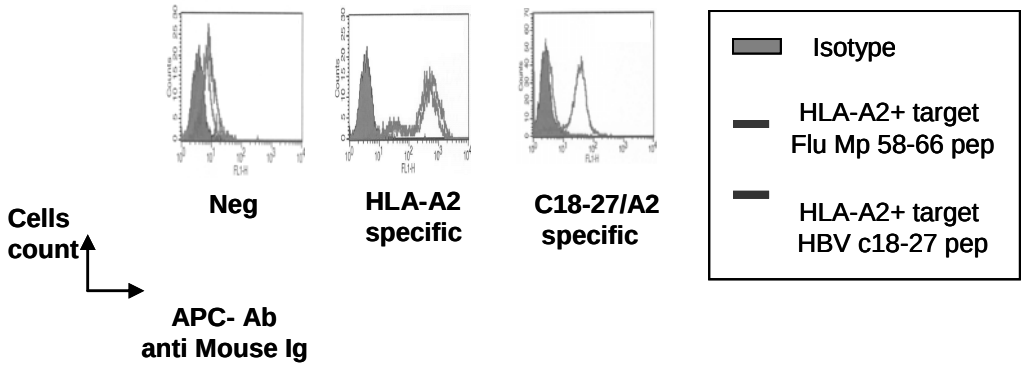
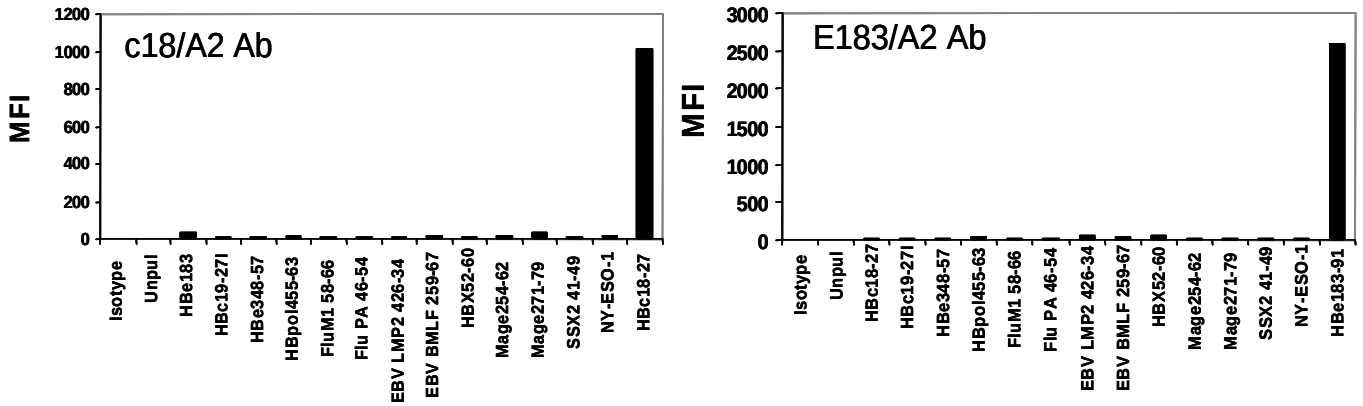
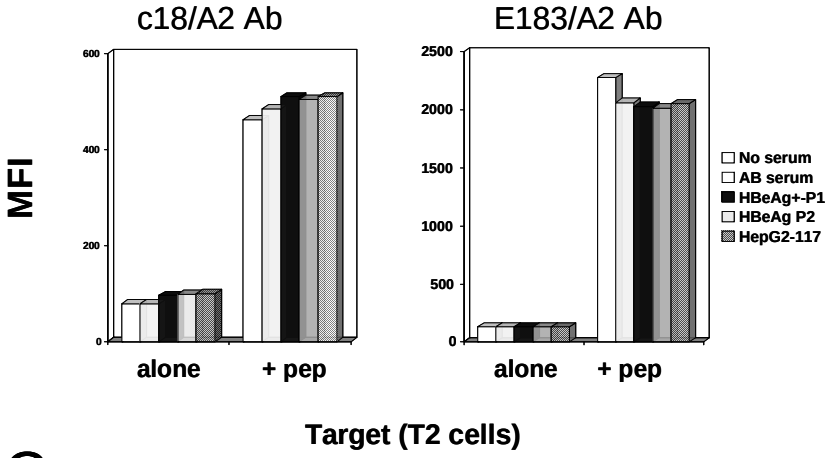


FIGURE 7

A


c18/A2 Ab
MFI
1200
1000
800
600
400
200
0
Isotype
Unpul
HBe183
HBc19-27l
HBe348-57
HBpol455-63
FluM1 58-66
Flu PA 46-54
EBV LMP2 426-34
EBV BMLF 259-67
HBX52-60
Mage254-62
Mage271-79
SSX2 41-49
NY-ESO-1
HBc18-27
E183/A2 Ab
MFI
3000
2500
2000
1500
1000
500
0
Isotype
Unpul
HBc18-27
HBc19-27l
HBe348-57
HBpol455-63
FluM1 58-66
Flu PA 46-54
EBV LMP2 426-34
EBV BMLF 259-67
HBX52-60
Mage254-62
Mage271-79
SSX2 41-49
NY-ESO-1
HBe183-91

B


c18/A2 Ab
E183/A2 Ab
MFI
600
400
200
0
2500
2000
1500
1000
500
0
alone
+ pep
alone
+ pep
No serum
AB serum
HBeAg+-P1
HBeAg P2
HepG2-117
Target (T2 cells)

C

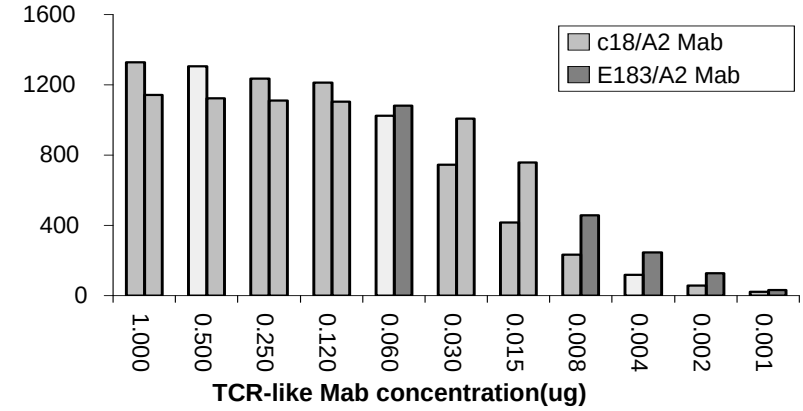

1600
1200
800
400
0
c18/A2 Mab
E183/A2 Mab
1.000
0.500
0.250
0.120
0.060
0.030
0.015
0.008
0.004
0.002
0.001
TCR-like Mab concentration(ug)

FIGURE 8

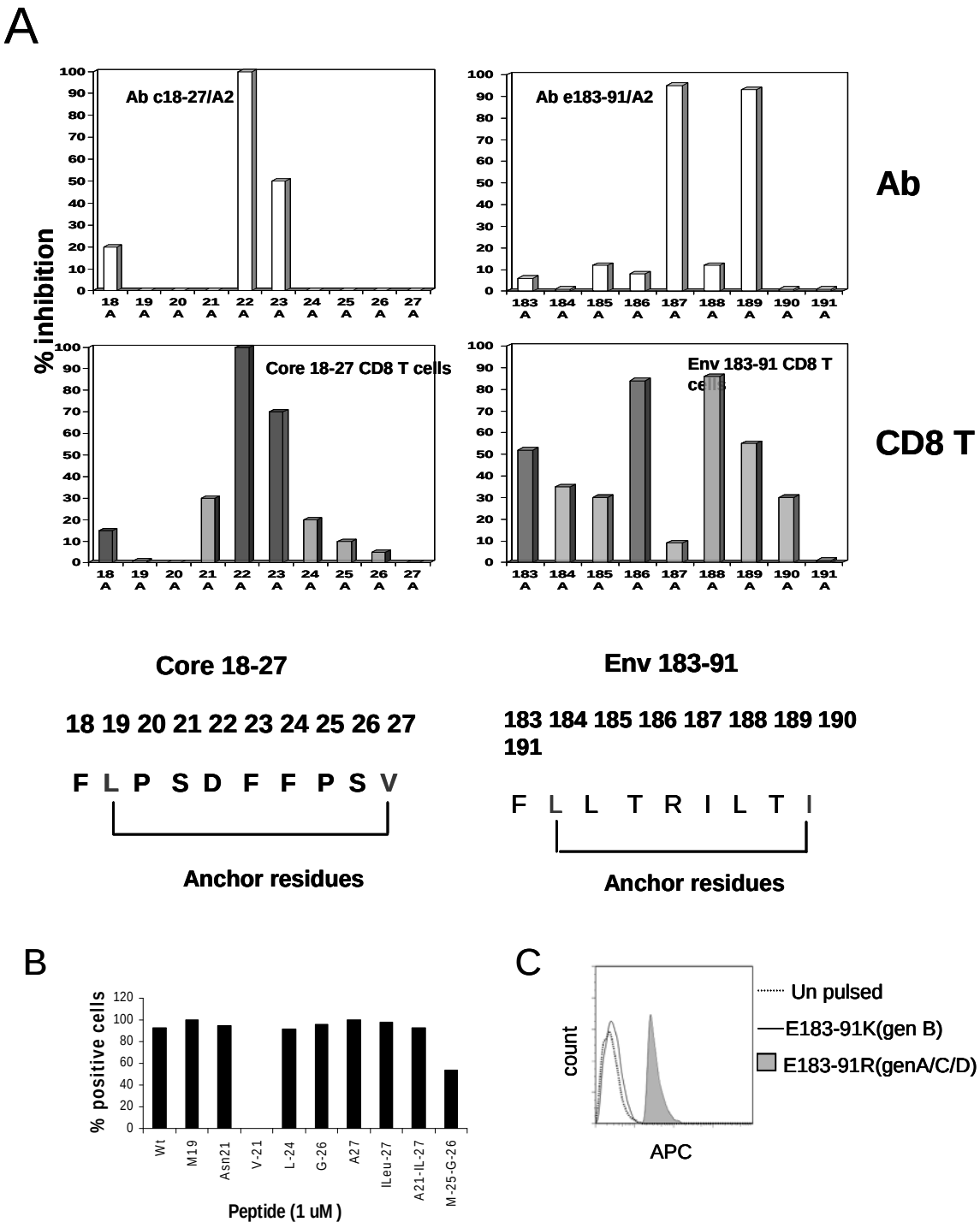

A
Ab c18-27/A2
Ab e183-91/A2
Ab
% inhibition
Core 18-27 CD8 T cells
Env 183-91 CD8 T cells
CD8 T
Core 18-27
18 19 20 21 22 23 24 25 26 27
F L P S D F F P S V
Anchor residues
Env 183-91
183 184 185 186 187 188 189 190 191
F L L T R I L T I
Anchor residues
B
% positive cells
Wt
M19
Asn21
V-21
L-24
G-26
A27
ILeu-27
A21-IL-27
M-25-G-26
Peptide (1 uM)
C
count
Un pulsed
E183-91K(gen B)
E183-91R(genA/C/D)
APC

FIGURE 9

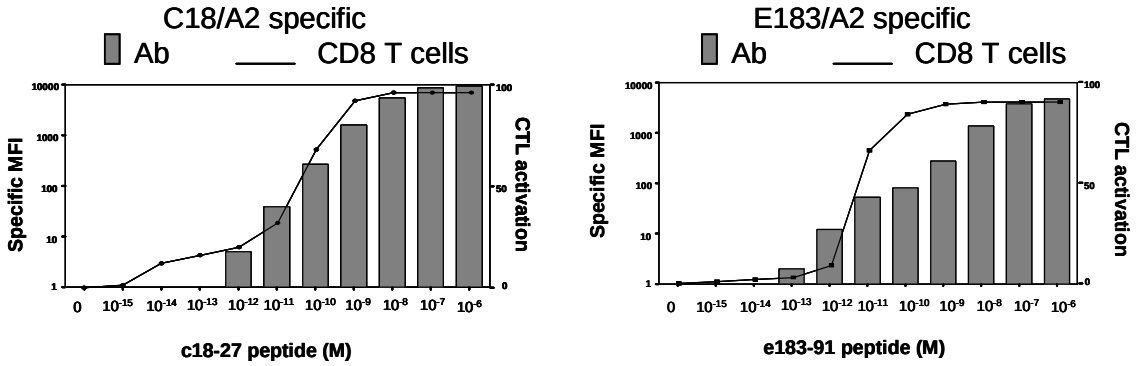


FIGURE 10

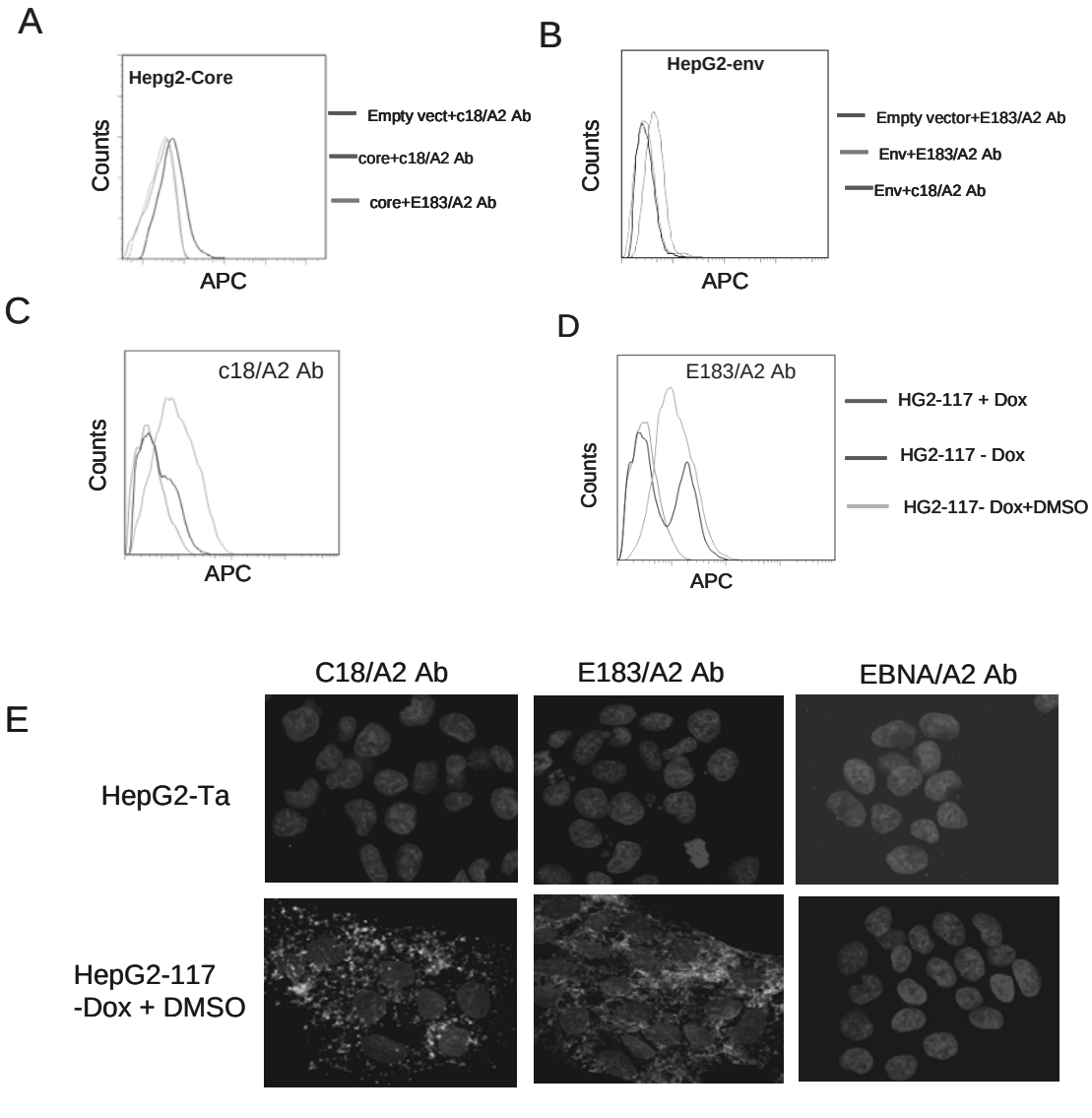


FIGURE 11

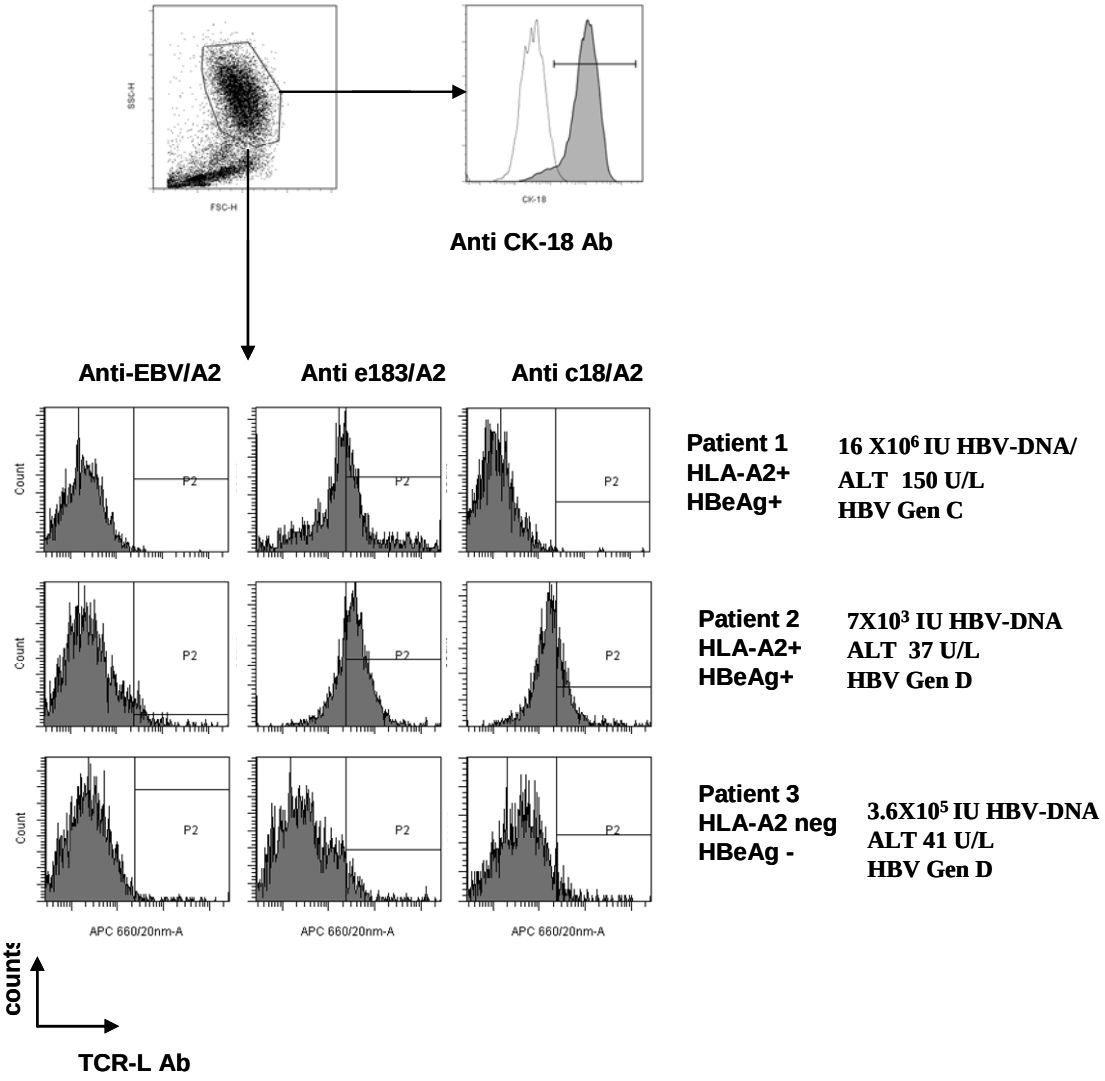

SSC-H
FSC-H
CK-18
Anti CK-18 Ab
Anti-EBV/A2
Anti e183/A2
Anti c18/A2
Count
P2
APC 660/20nm-A
counts
TCR-L Ab
Patient 1
HLA-A2+
HBeAg+
16 X10⁶ IU HBV-DNA/
ALT 150 U/L
HBV Gen C
Patient 2
HLA-A2+
HBeAg+
7X10³ IU HBV-DNA
ALT 37 U/L
HBV Gen D
Patient 3
HLA-A2 neg
HBeAg -
3.6X10⁵ IU HBV-DNA
ALT 41 U/L
HBV Gen D

FIGURE 12

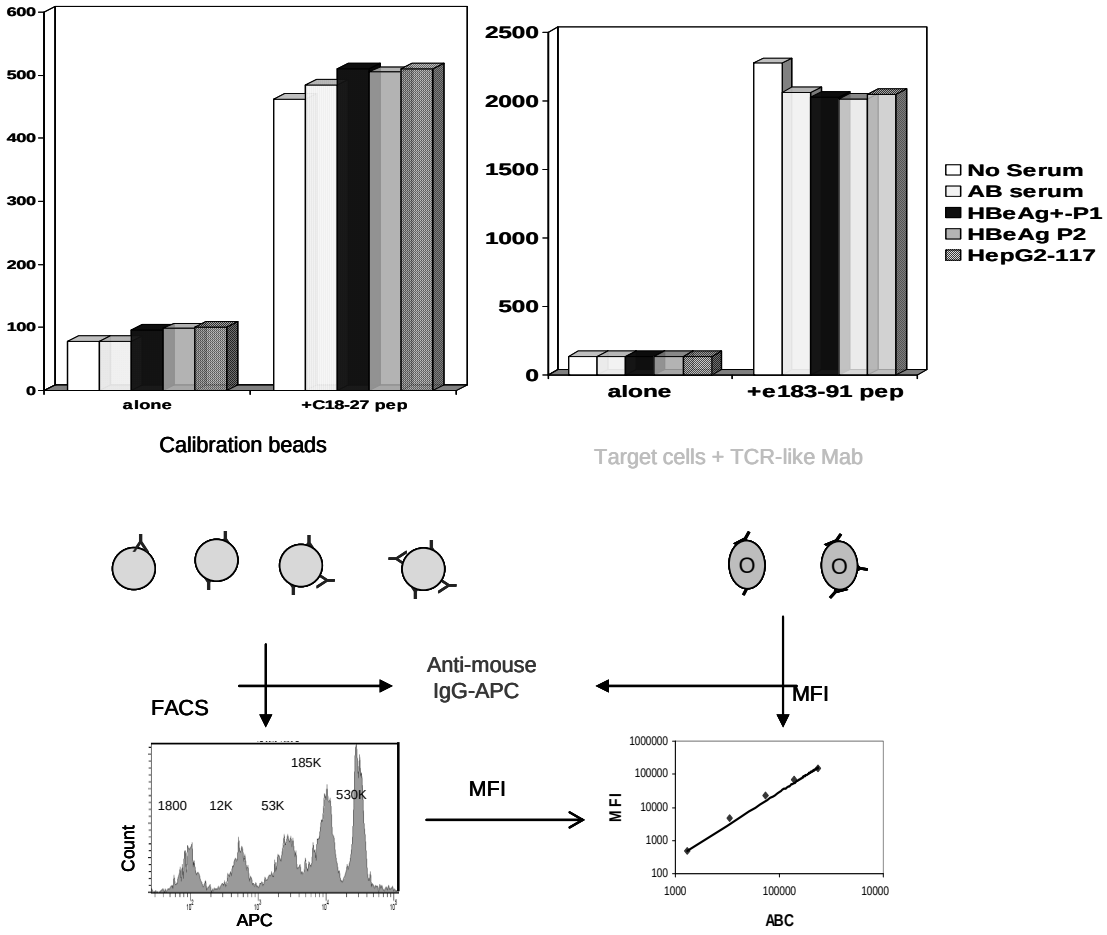


FIGURE 13

E183/A2 antibody

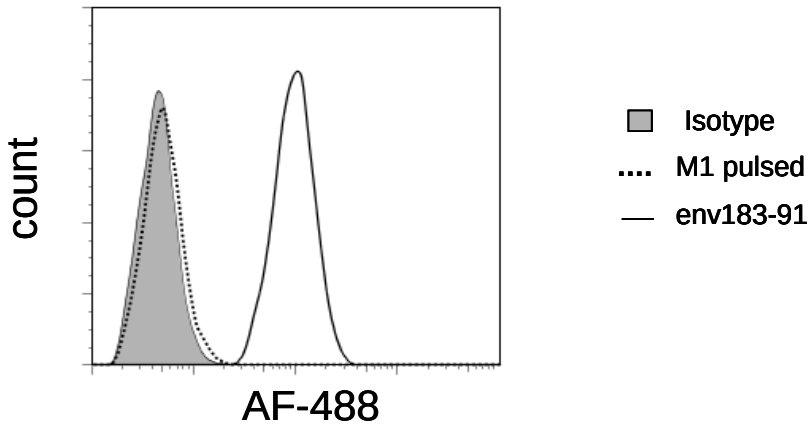


FIGURE 14

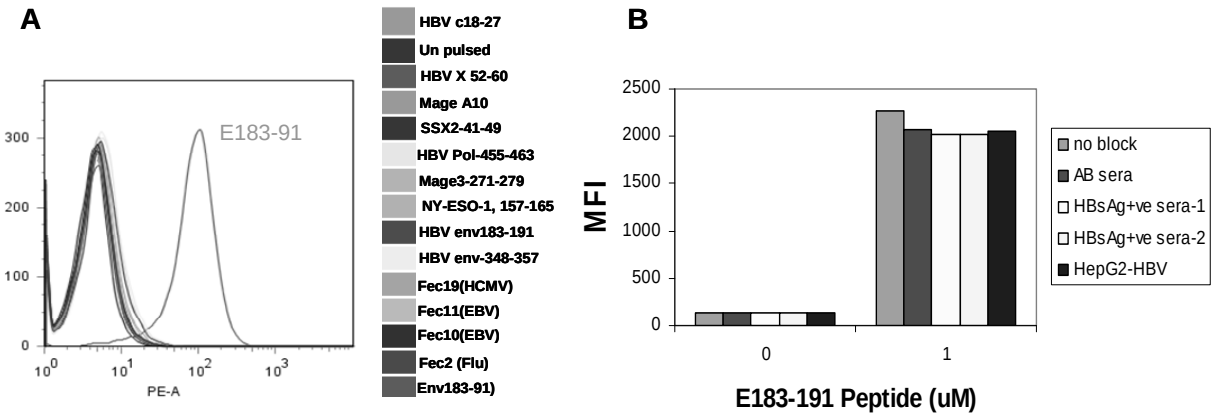


FIGURE 15

E183/A2 mAb

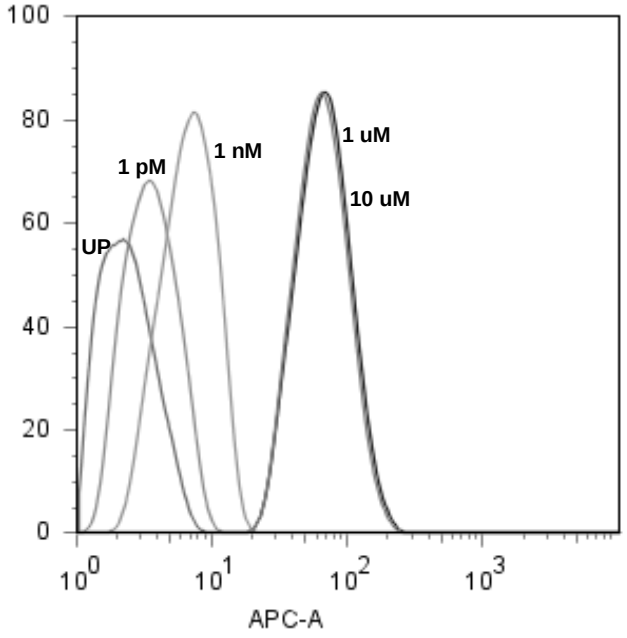


FIGURE 16

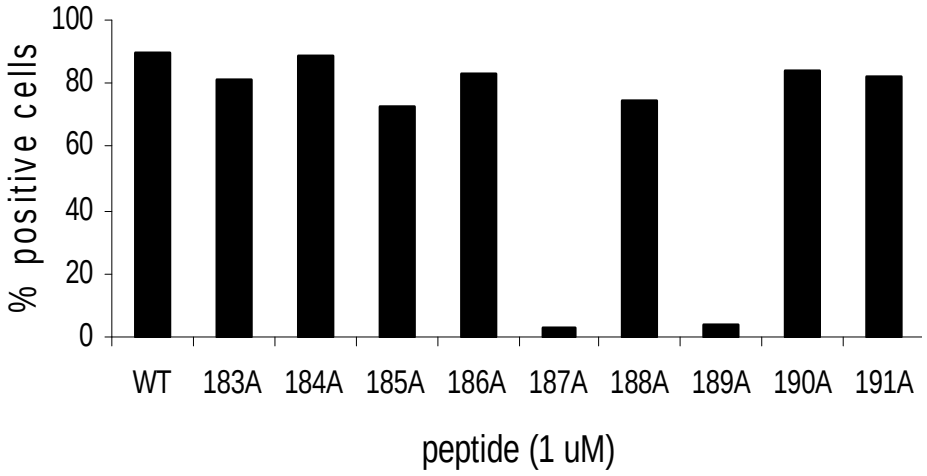


FIGURE 17

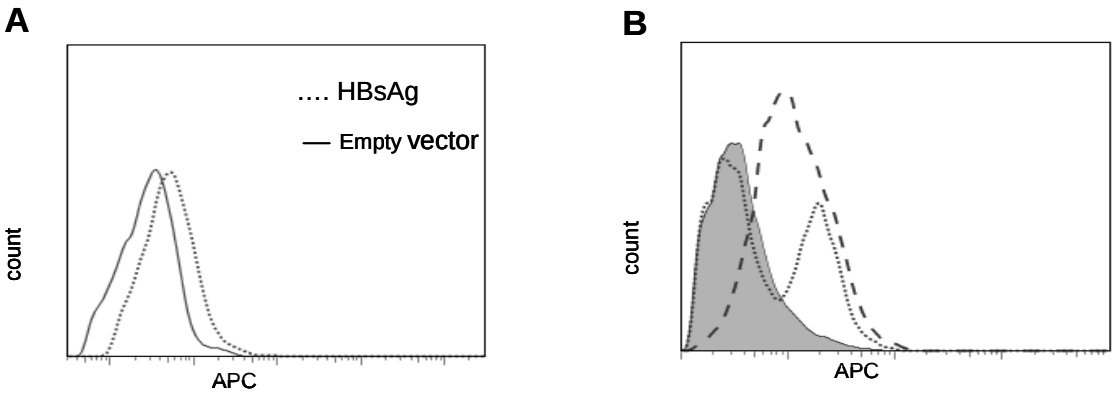


FIGURE 18

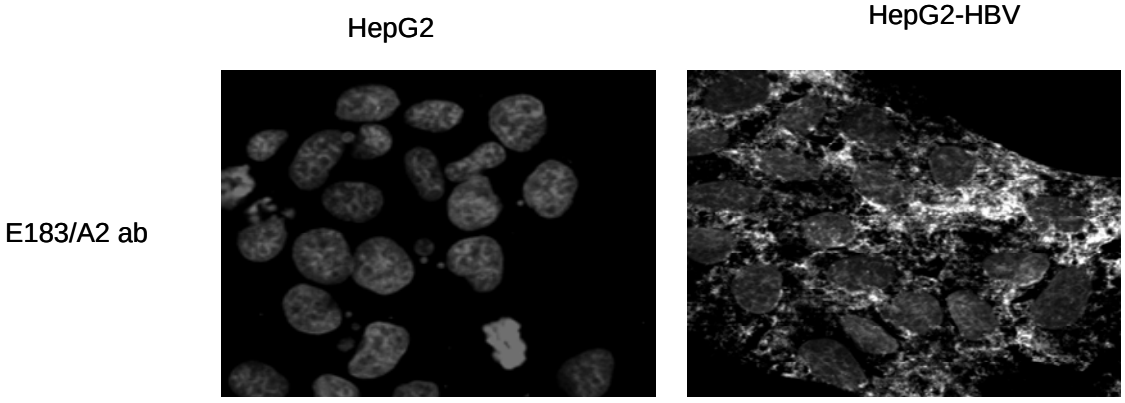


FIGURE 19



FIGURE 20

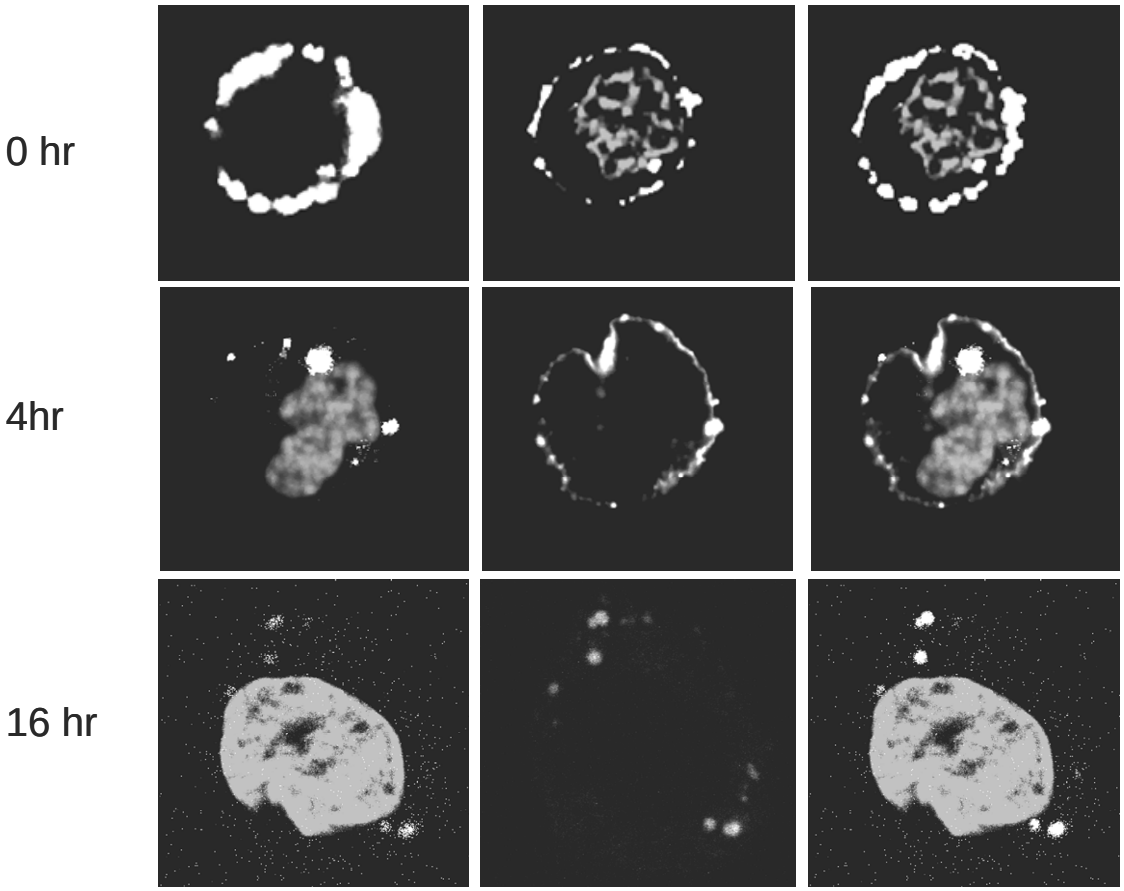


FIGURE 21