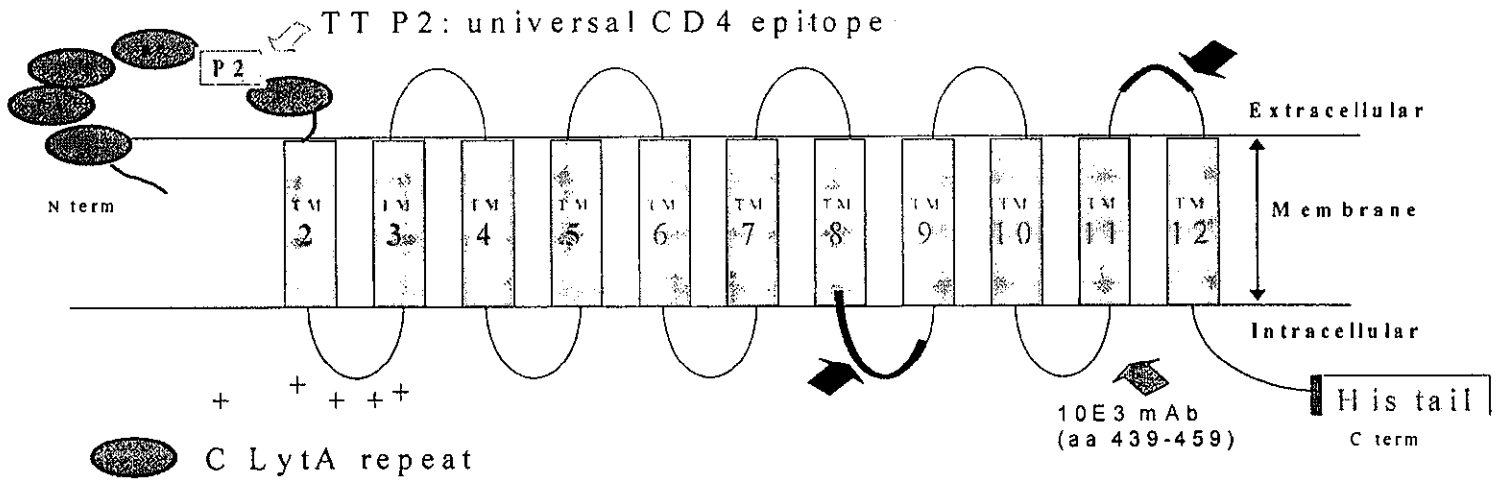

TT P2: universal CD4 epitope
P2
N term
TM 2
TM 3
TM 4
TM 5
TM 6
TM 7
TM 8
TM 9
TM 10
TM 11
TM 12
Extracellular
Membrane
Intracellular
+ + + + +
10E3 mAb
(aa 439-459)
His tail
C term
C LytA repeat

Figure 2

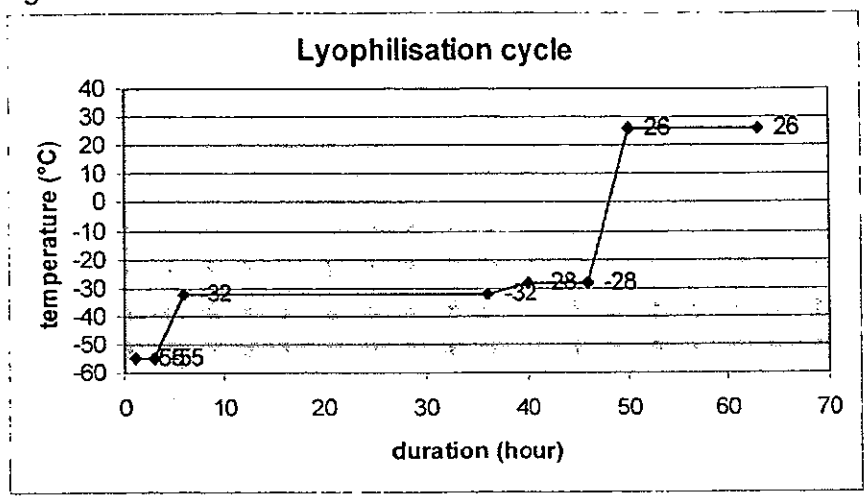

Lyophilisation cycle
temperature (°C)
40
30
20
10
0
-10
-20
-30
-40
-50
-60
0
10
20
30
40
50
60
70
duration (hour)
26
26
-32
-32
-28
-28
-55
-55

Figure 3

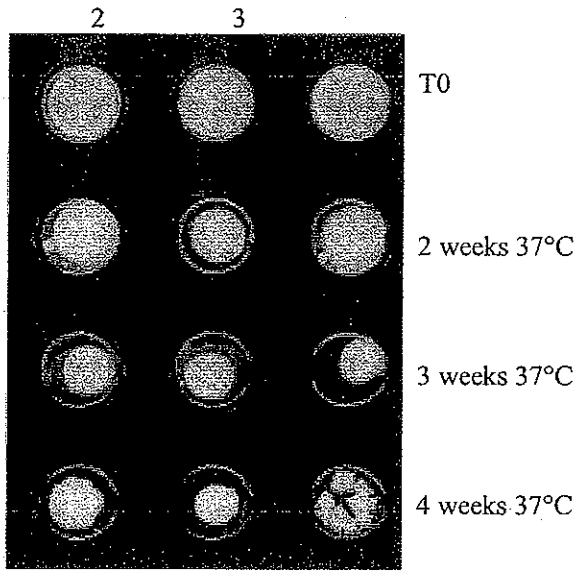


Figure 4

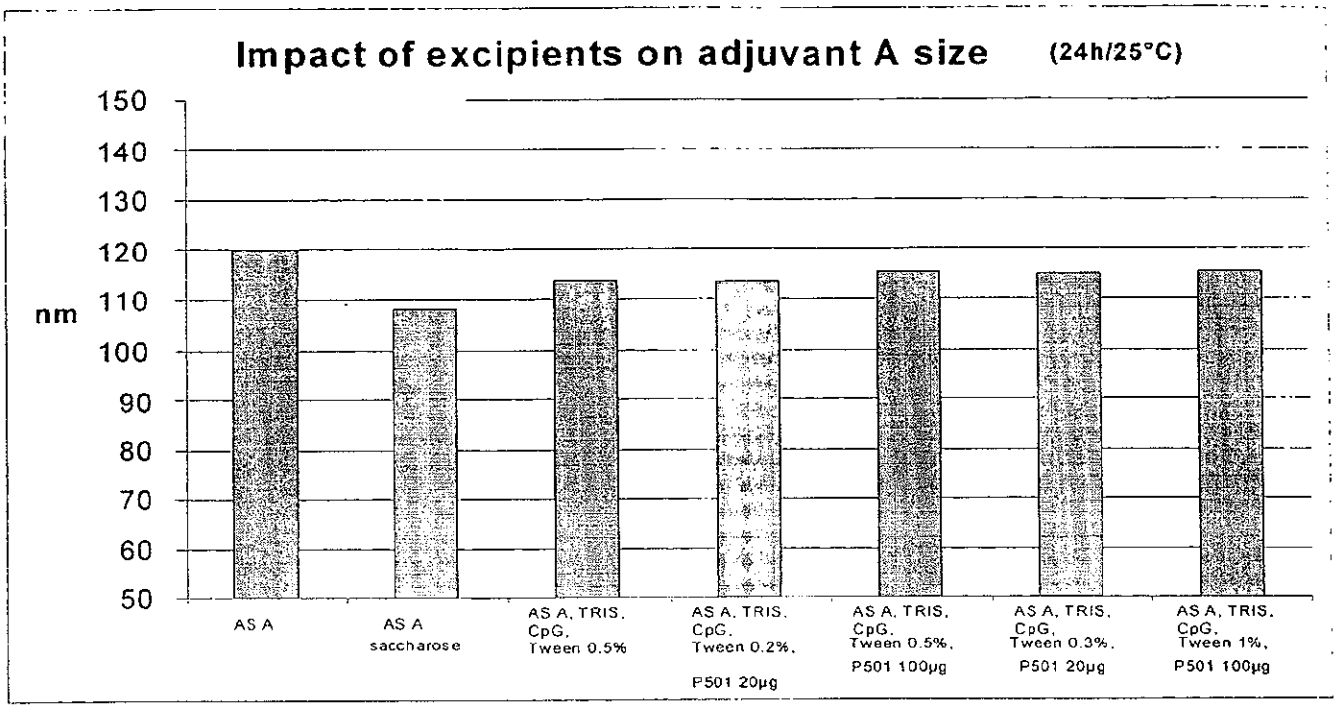
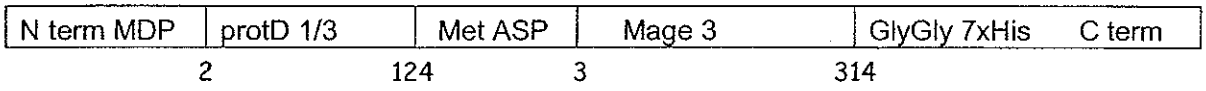

Impact of excipients on adjuvant A size (24h/25°C)
nm
150
140
130
120
110
100
90
80
70
60
50
AS A
AS A saccharose
AS A, TRIS, CpG, Tween 0.5%
AS A, TRIS, CpG, Tween 0.2%, P501 20µg
AS A, TRIS, CpG, Tween 0.5%, P501 100µg
AS A, TRIS, CpG, Tween 0.3%, P501 20µg
AS A, TRIS, CpG, Tween 1%, P501 100µg

Figure 5

LipoD1/3 - MAGE3 – HIS protein :



SEQ ID NO:13

```
MDPKTLALSLLAAGVLAGCSSHSSNMANTQMKSDKIIIAH 40
RGASGYLPEHTLESKALAFAQQADYLEQDLAMTKDGRLVV 80
IHDHFLDGLTDVAKKFPHRHRKDGRYYVIDFTLKEIQSLE 120
MTENFETMDLEQRSQHCKPEEGLEARGEALGLVGAQAPAT 160
EEQEAASSSSTLVEVTLGEVPAAESPDPPQSPQGASSLPT 200
TMNYPLWSQSYEDSSNQEEEGPSTFPDLESEFQAALSRKV 240
AELVHFLLLKYRAREPVTKAEMLGSVVGNWQYFFPVIFSK 280
ASSSLQLVFGIELMEVDPIGHLYIFATCLGLSYDGLLGDN 320
QIMPKAGLLIIVLAIIAREGDCAPEEKIWEELSVLEVFEG 360
REDSILGDPKKLLTQHFVQENYLEYRQVPGSDPACYEFLW 400
GPRALVETSYVKVLHHMVKISGGPHISYPPLHEWVLREGE 440
EGGHHHHHHH. 451
```

RED = signal sequence 15aa
Blue = first 109 amino acids of Protein D
Pink = unrelated amino acids

* (MDP first aa of Influenza)
* (Met-Asp at aa 128-129 to create a cloning site))
* (Gly-Gly at 442-443).

Green = fragment of MAGE3; amino acids 3-314 of MAGE3 (312 aas total)
Orange = 7 his tail

Figure 6

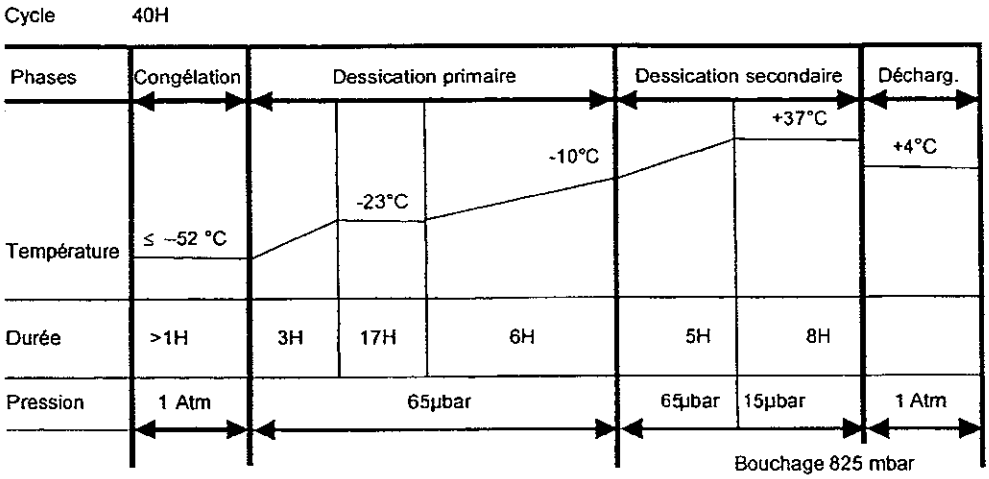

Cycle 40H
Phases
Congélation
Dessication primaire
Dessication secondaire
Décharg.
Température
≤ −52 °C
-23°C
-10°C
+37°C
+4°C
Durée
>1H
3H
17H
6H
5H
8H
Pression
1 Atm
65µbar
65µbar
15µbar
1 Atm
Bouchage 825 mbar

Figure 7

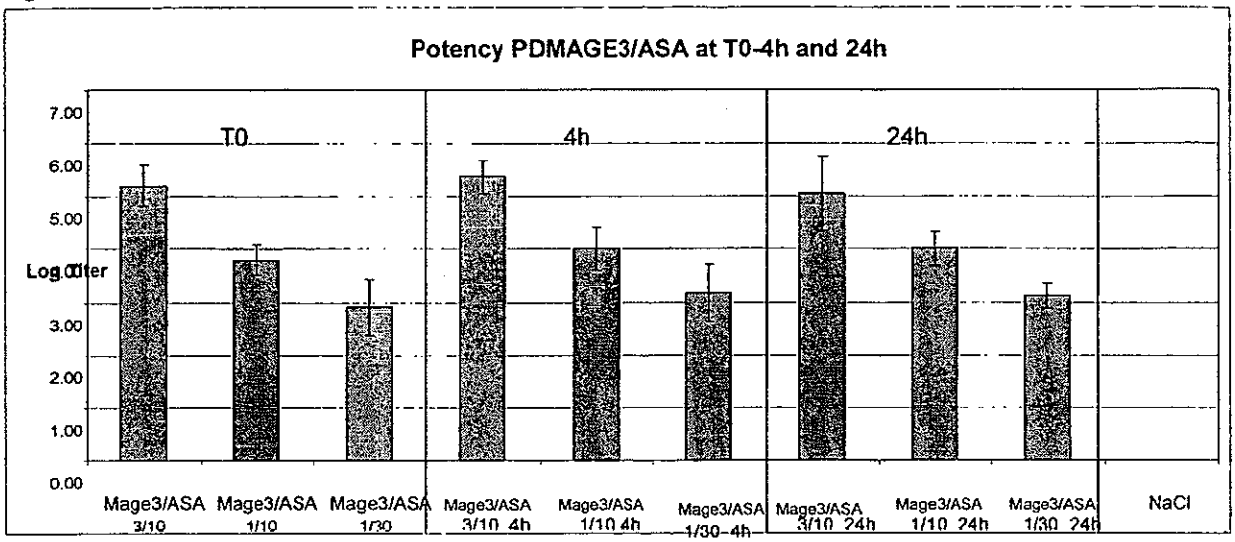

Potency PDMAGE3/ASA at T0-4h and 24h
T0
4h
24h
7.00
6.00
5.00
Log Titer
3.00
2.00
1.00
0.00
Mage3/ASA 3/10
Mage3/ASA 1/10
Mage3/ASA 1/30
Mage3/ASA 3/10 4h
Mage3/ASA 1/10 4h
Mage3/ASA 1/30-4h
Mage3/ASA 3/10 24h
Mage3/ASA 1/10 24h
Mage3/ASA 1/30 24h
NaCl

Figure 8

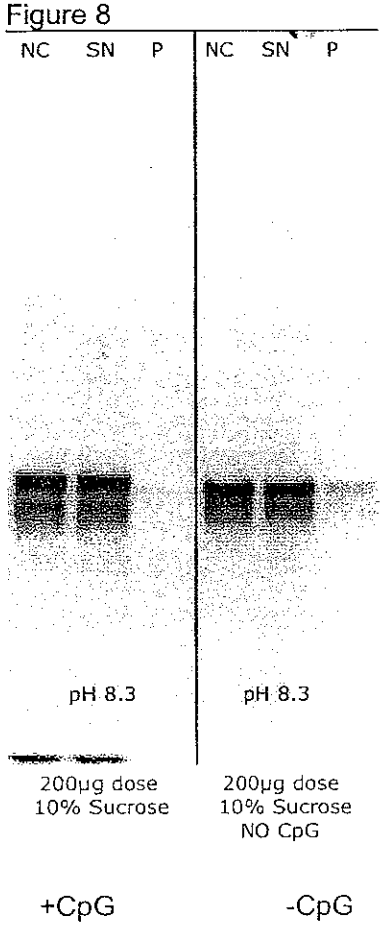
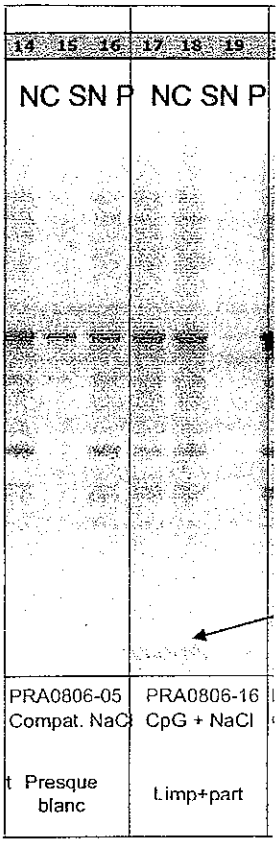

NC
SN
P
NC
SN
P
pH 8.3
pH 8.3
200µg dose
10% Sucrose
200µg dose
10% Sucrose
NO CpG
+CpG
-CpG

Figure 9



- CpG + CpG