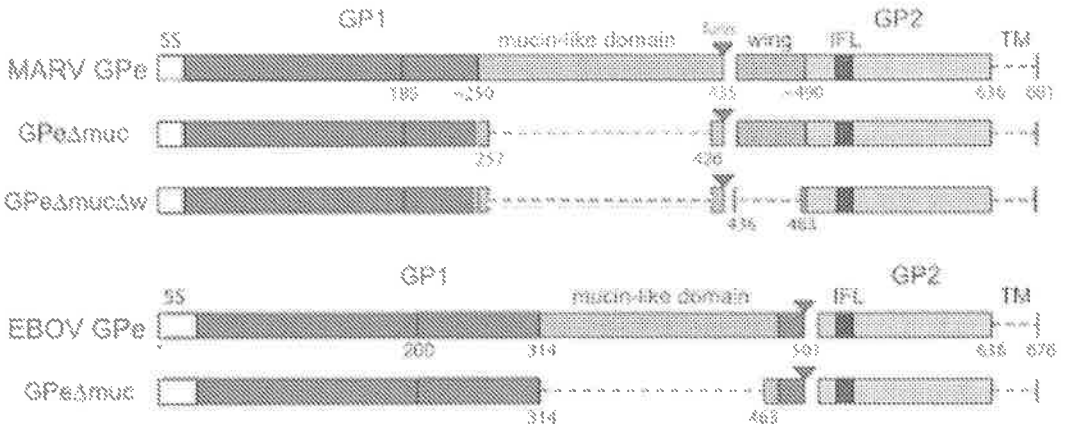

GP1
GP2
SS
mucin-like domain
furin
wing
IFL
TM
MARV GPe
GPeΔmuc
GPeΔmucΔw
EBOV GPe
GPeΔmuc

FIG. 1

Antibody	Immunogen Strain	Immunogen	GPe					GPeΔmuc					GPd		GPeΔmuc/cw	Epitope	Pseudovirus neut	Mouse survival
			M	C	A	R	E	M	C	A	R	E	R	E	R			
40G1	A	GPeΔmuc	++	++	++	++	-	++	++	++	++	+	++	++	++	GP1	N	4/10
30G1	R	GPeΔmuc	+	++	++	++	-	++	++	++	++	-	+	-	++	GP1	N	ND
30G3	R	GPeΔmuc	-	-	-	++	-	++	++	+	++	-	++	-	-	GP2 wing	P	14/20
30G4	R	GPeΔmuc	++	++	++	++	-	++	++	++	++	-	++	-	-	GP2 wing	P	6/10
30G5	R	GPeΔmuc	+	-	+	++	-	++	++	++	++	-	++	-	-	GP2 wing	P	20/20
54G1	R	GPeΔmuc	-	-	-	++	-	++	++	-	++	-	++	-	++	GP2	P	0/10
54G2	R	GPeΔmuc	-	-	+	++	-	++	++	+	++	-	++	-	-	GP2 wing	P	18/20
54G3	R	GPeΔmuc	++	++	++	++	-	++	++	++	++	-	++	-	++	GP1	N	1/10

FIG. 2

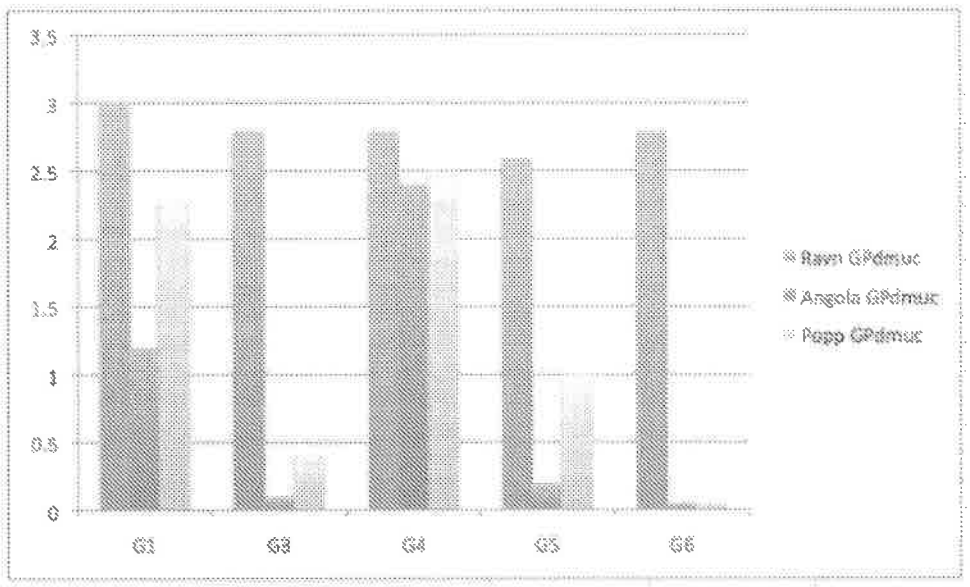

3.5
3
2.5
2
1.5
1
0.5
0
G2
G3
G4
G5
G6
Raw GPdmuc
Angola GPdmuc
Rapp GPdmuc

FIG. 3

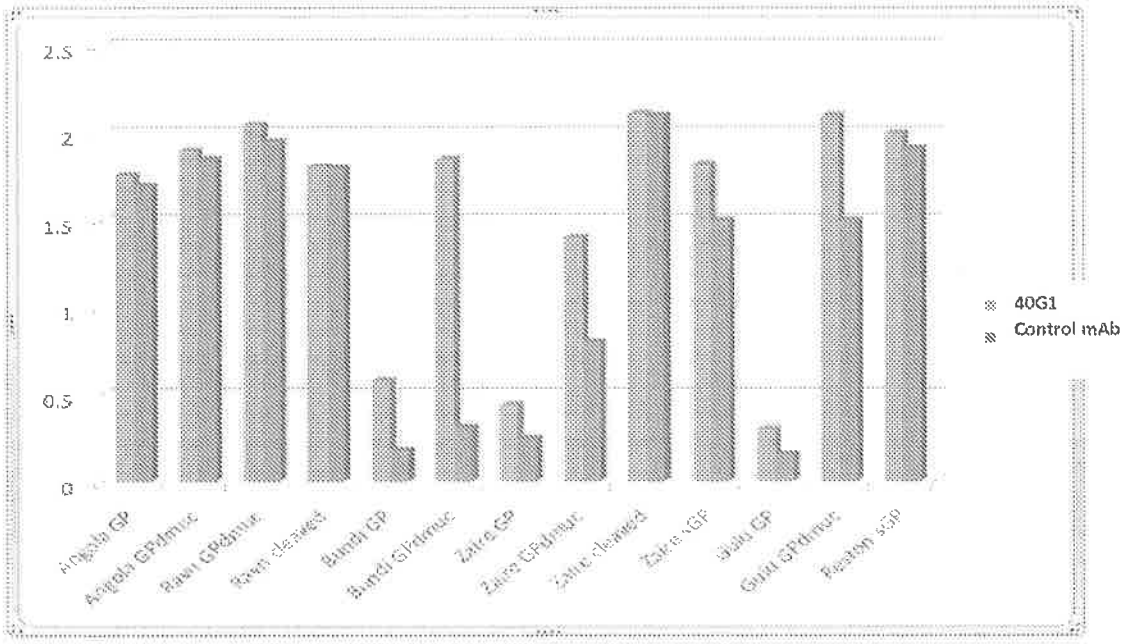


FIG. 4

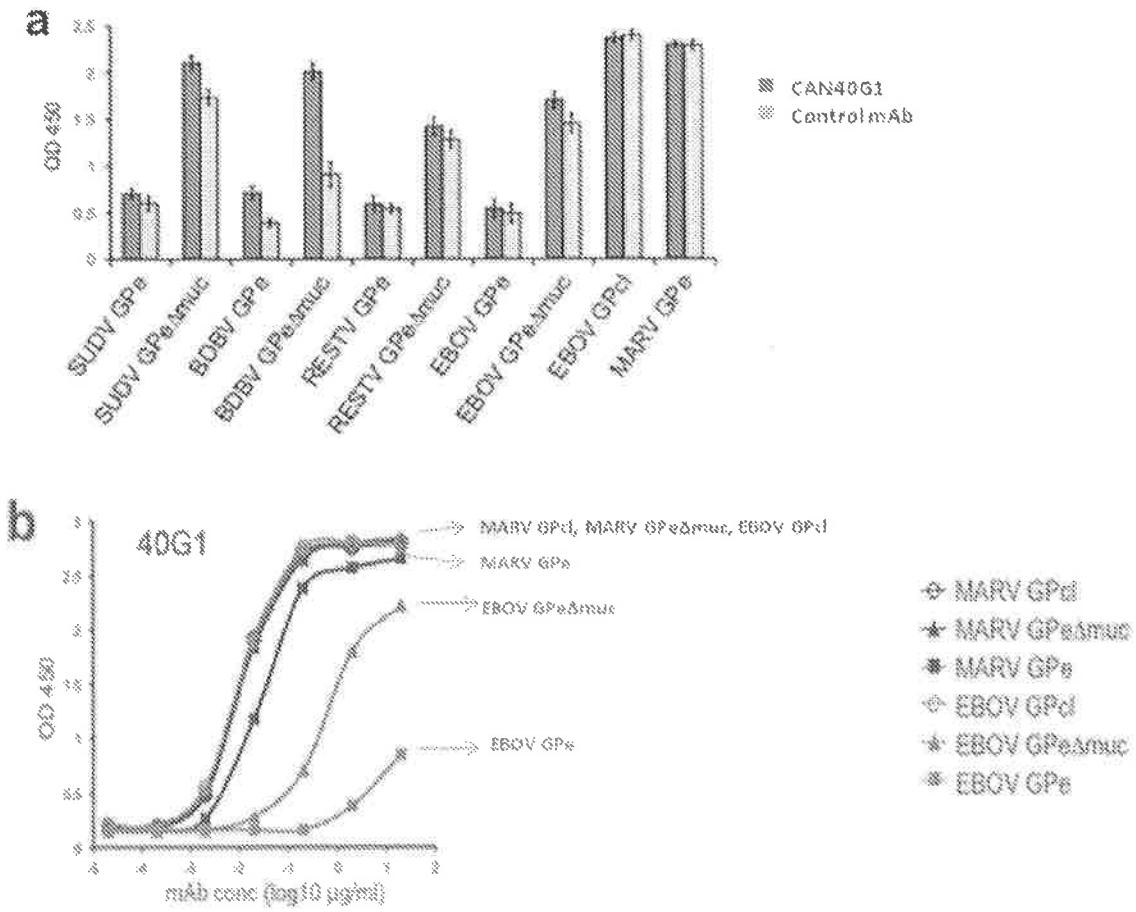

a
OD 450
CAN40G1
Control mAb
SUDV GPe
SUDV GPeΔmuc
BDBV GPe
BDBV GPeΔmuc
RESTV GPe
RESTV GPeΔmuc
EBOV GPe
EBOV GPeΔmuc
EBOV GPcl
MARV GPe
b
40G1
OD 450
MARV GPcl, MARV GPeΔmuc, EBOV GPcl
MARV GPe
EBOV GPeΔmuc
EBOV GPe
mAb conc (log10 μg/ml)
MARV GPcl
MARV GPeΔmuc
MARV GPe
EBOV GPcl
EBOV GPeΔmuc
EBOV GPe

FIG. 5

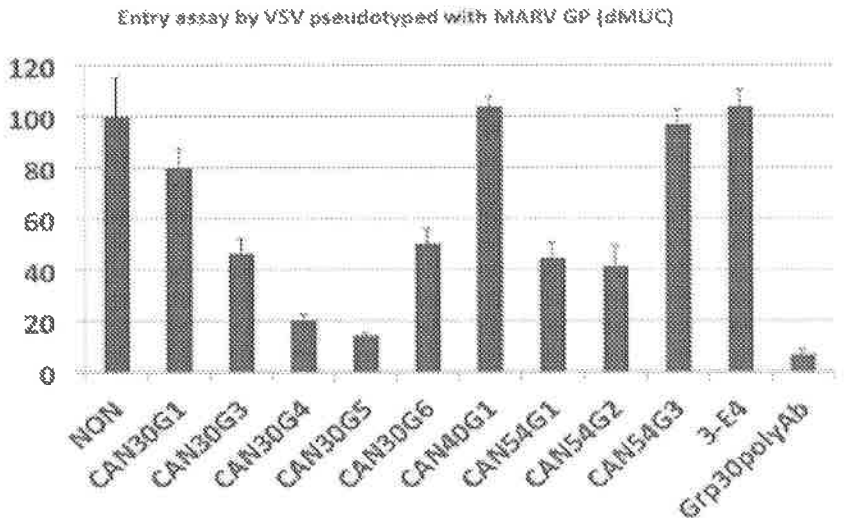

Entry assay by VSV pseudotyped with MARV GP (dMUC)
120
100
80
60
40
20
0
NON
CAN30G1
CAN30G3
CAN30G4
CAN30G5
CAN30G6
CAN40G1
CAN54G1
CAN54G2
CAN54G3
3-E4
Grp30polyAb

FIG. 6A

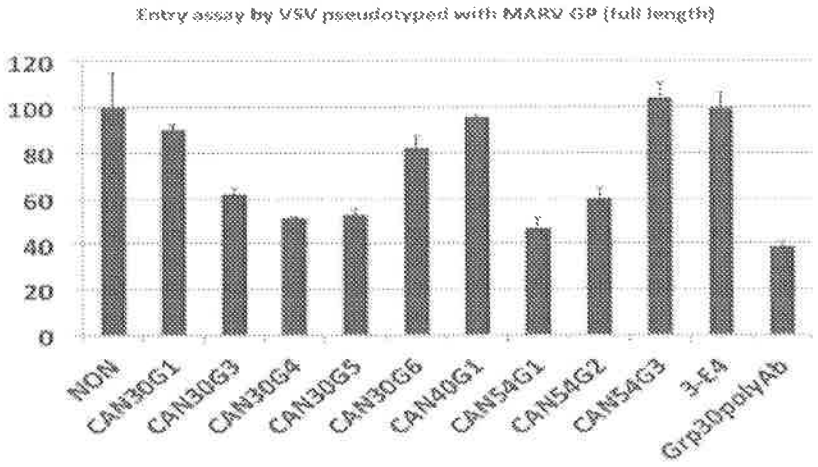

Entry assay by VSV pseudotyped with MARV GP (full length)
120
100
80
60
40
20
0
NON
CAN30G1
CAN30G3
CAN30G4
CAN30G5
CAN30G6
CAN40G1
CAN54G1
CAN54G2
CAN54G3
3-E4
Grp30polyAb

FIG. 6B

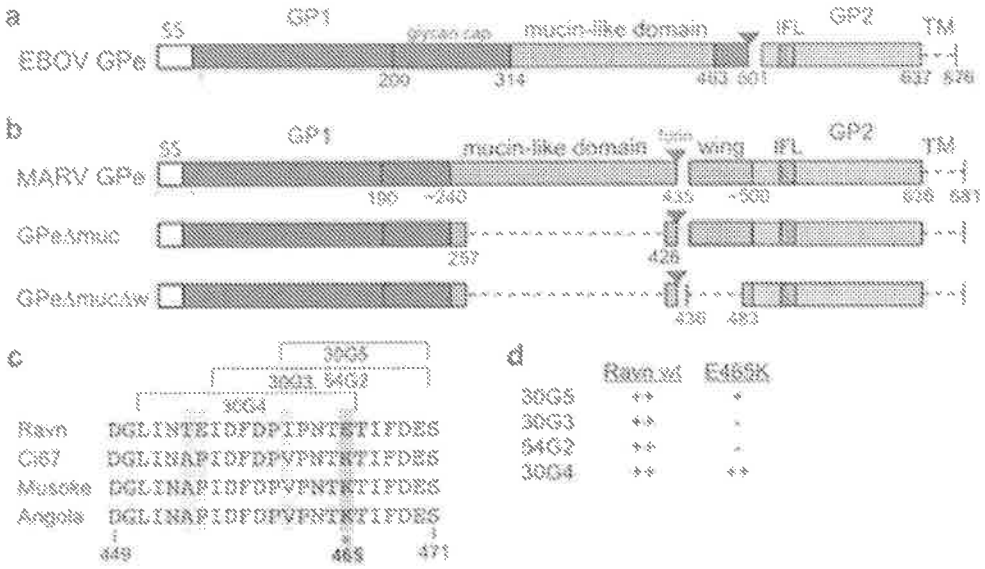

a
EBOV GPe
GP1
GP2
mucin-like domain
IFL
TM
b
MARV GPe
GPeΔmuc
GPeΔmucΔw
mucin-like domain
wing
c
Ravn
Ci67
Musoke
Angola
d
Ravn wt
E468K
30G5
30G3
54G2
30G4

FIG. 7

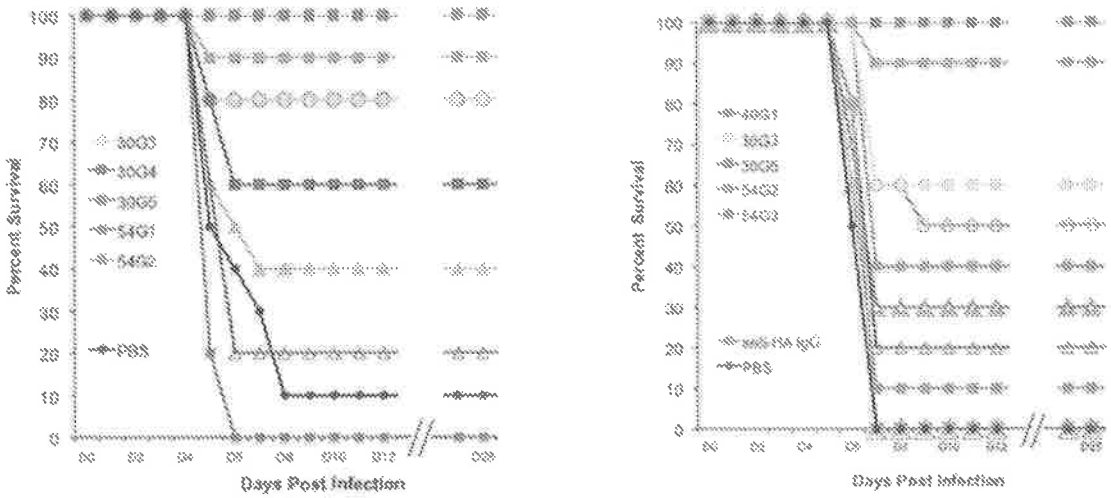

Percent Survival
Days Post Infection
30G3
30G4
30G5
54G1
54G2
PBS
Percent Survival
Days Post Infection
54G3
PBS

FIG. 8

CAN30G5

VK

*Gatattgtgctg*acccaatctccactctccctgcctgtcagtcttggagatcaagcctccatctcttgcagatctagtcagagc cttgtacacagtaatggaaacacctatttacattggtacctgcagaagccaggccagtctccaaacctcctgatctacaaa gtttccaaccgattttctggggtcccagacaggttcagtggcagtggatcagggacagatttcacactcaagatcagcaga gtggaggctgaggatctgggagtttatttctgc**tctcaaagtacacatgttccgtggacg**ttcggtggaggcaccaagct ggaaatcaaac (SEQ ID NO:202)

start of FR1

CDR3

Jgene

Result summary:	**Productive IGK rearranged sequence** (no stop codon and in-frame junction)		
V-GENE and allele	Musmus IGKV1-110*01 F	score = 1429	identity = **98,64%** (290/294 nt)
J-GENE and allele	Musmus IGKJ1*01 F	score = 190	identity = 100,00% (38/38 nt)
FR-IMGT lengths, CDR-IMGT lengths and AA JUNCTION	[26.17.36.10]	[11.3.9]	CSQSTHVPWTF

VH

*Gaggtgcagcttgt*gagtctggtggaggattggtgcagcctaaaggatcattgaaactctcatgtgccgcctctggtttcgc cttcaattcctatgccatgcactgggtctgccaggctccaggaaagggttttggaatgggttgctcgcataagaattaaaagt ggtaattatgcaacatcttatgccggttcagtgacagacagattcaccgtctccagagatgattcacaaaacttgttctatctg caaatgaacaacctgaaaactgaggacacagccatgtattactgt**gtgagagagtgggaaggggctatggactact** ggggtcaaggaacctcagtcaccgtctcctcag (SEQ ID NO:203)

FIG. 9

start of FR1

CDR3

Jgene

Result summary:	**Productive IGH rearranged sequence** (no stop codon and in-frame junction)		
V-GENE and allele	Musmus IGHV10-3*01 F	score = 1357	identity = **95,92%** (282/294 nt)
J-GENE and allele	Musmus IGHJ4*01 F	score = 207	identity = 87,04% (47/54 nt)
D-GENE and allele by IMGT/JunctionAnalysis	Musmus IGHD1-3*01 F	D-REGION is in reading frame 2	
FR-IMGT lengths, CDR-IMGT lengths and AA JUNCTION			

FIG. 9 (cont.)

CAN40G1

VK

*Gacattgtgctg*acccaatctccagcttctttggctgtgtctctagggcagagggcctccatctcctgcaaggccagccaaa gtgttgatcatgatggtgatagttatatgaactggtaccaacagaaaccaggacagccacccaaactcctcatctatgctac atccaatctagaatctgggatcccagccaggtttagtggcagtgggtctgggacagacttcaccctcaacatccatcctgtg gaggaggaggatgctgcaacctattactgt**cagcaaagttatgaggttcc**gctcacgttcggtgctgggaccaagctg gagctgaaac (SEQ ID NO:204)

start of FR1

CDR3

Jgene

Result summary:	**Productive IGK rearranged sequence** (no stop codon and in-frame junction)		
V-GENE and allele	Musmus IGKV3-4*01 F	score = 1414	identity = **98,63%** (287/291 nt)
J-GENE and allele	Musmus IGKJ5*01 F	score = 190	identity = 100,00% (38/38 nt)
FR-IMGT lengths, CDR-IMGT lengths and AA JUNCTION			

VH

*Gaggtccagct*gcaacagtctggacctgagctggtgaagcctggggcttcagtgaagatatcctgcaggacttctggata cacattcactgaatacaccattcactgggtgaagcagagccgtggaaagagccttgagtggattggaggtattaatcctaa ccatggtggtactctctacaaccagaagttcaaggtcaaggccacattgactgtagacaagtcctccagcacagcctacat

FIG. 10

ggagctccgcagcctgacatctgaggattctgcagtctattactgt**gcaagatttacttacgactactggggccaaggc**
accactctcacagtctcctcag (SEQ ID NO:205)

start of FR1

CDR3

Jgene

Result summary:	**Productive IGH rearranged sequence** (no stop codon and in-frame junction)		
V-GENE and allele	Musmus IGHV1-18*01 F	score = 1309	identity = **95,14%** (274/288 nt)
J-GENE and allele	Musmus IGHJ2*01 F (a)	score = 177	identity = 85,42% (41/48 nt)
D-GENE and allele by IMGT/JunctionAnalysis	Musmus IGHD2-12*01 F	D-REGION is in reading frame 3	
FR-IMGT lengths, CDR-IMGT lengths and AA JUNCTION	[25.17.38.11]	[8.8.7]	CARFTYDYW

FIG. 10 (cont.)

CAN54G2

VK

*Gatgttgtga*tgacccagactcccctcactttgtcggttaccattggacagccagcctccatctcttgcacgtcaagtcagag cctcttaaatagtgatggggagacatatttgaattggttgttacagaggccaggccagtctccaaagcgcctaatccatctg gtgtctaaactggactctggagtccctgacaggatcactggcagtggatctgggacagatttcacactgaaaatcaacag agtggaggctgaggatttgggaatttattattgc**tggcaaggtacacattttcc**gtggacgttcggtggaggcaccaagc tggaaatcaaac (SEQ ID NO:206)

start of FR1

CDR3

Jgene

Result summary:	**Productive IGK rearranged sequence** (no stop codon and in-frame junction)		
V-GENE and allele	Musmus IGKV1-135*01 F	score = 1366	identity = **96,26%** (283/294 nt)
J-GENE and allele	Musmus IGKJ1*01 F	score = 190	identity = 100,00% (38/38 nt)
FR-IMGT lengths, CDR-IMGT lengths and AA JUNCTION	[26.17.36.10]	[11.3.9]	CWQGTHFPWTF

VH

*Caggtccagttg*cagcagtctggaactgagctggtaaggcctgggacttcagtgaagatatcctgcaaggcttctggatac gacttcactaacttttggctaggttggataaagcagaggcctggacatggacttgaatggattggagatatttaccctggag gtgataatacttactacaatgagaagttcaagggcaaagtcacgctgactgcagacaaatcctcgaacacagcctatatg cagttcagtagcctgacatctgaggactctgctgtctatttctgt**tttatgattct**ctatactttggactactggggtcaaggaa cctcagtcaccgtctcctcag (SEQ ID NO:207)

FIG. 11

start of FR1

CDR3

Jgene

Result summary:	**Productive IGH rearranged sequence** (no stop codon and in-frame junction)		
V-GENE and allele	Musmus IGHV1-63*01 F	score = 1210	identity = **91,32%** (263/288 nt)
J-GENE and allele	Musmus IGHJ4*01 F	score = 225	identity = 90,74% (49/54 nt)
D-GENE and allele by IMGT/JunctionAnalysis	Musmus IGHD2-4*01 F	D-REGION is in reading frame 1	
FR-IMGT lengths, CDR-IMGT lengths and AA JUNCTION	[25.17.38.11]	[8.8.9]	CFMILYTLDYW

FIG. 11 (cont.)

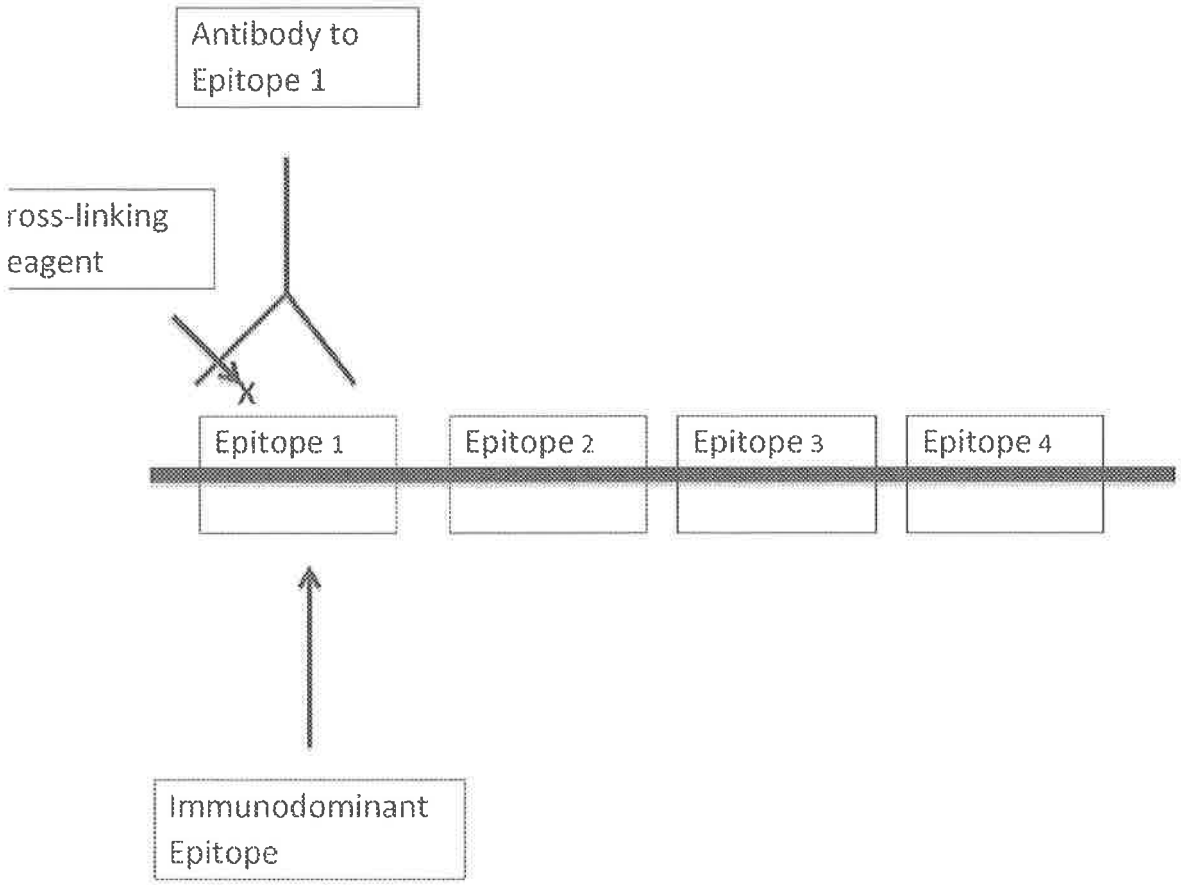

Antibody to Epitope 1
ross-linking eagent
Epitope 1
Epitope 2
Epitope 3
Epitope 4
Immunodominant Epitope

FIG. 12

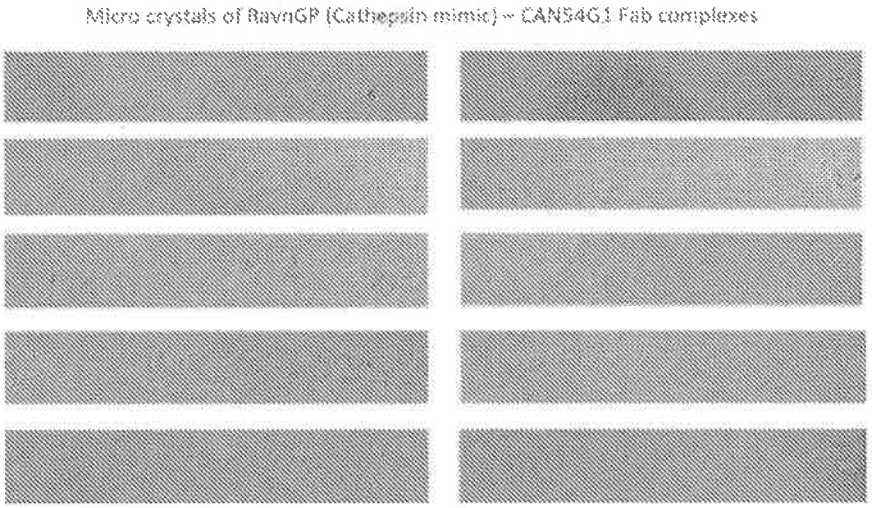

Micro crystals of RavnGP (Cathepsin mimic) – CAN54G1 Fab complexes

FIG. 13