

P19941NO00 - Sequence list.txt
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<220>

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<212> DNA
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<223> M2 CAN BC

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<213> Viruses

<220>

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<220>
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 Ser Leu Arg Ile Cys Val Glu Cys Gly His Arg Val Gly Leu Ser His
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 Asn Ala Lys Pro Thr Met Val Thr His Gln Cys Asp Gly Glu Thr Leu
 65 70 75 80
 Trp Asp His Ser Ala Pro Gly Asp Trp Thr Trp Ser Glu Trp Ser Tyr
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 Phe Val Thr Ser Cys Ala Asn Ala Leu Ser Ala Asn Ala Asp Ala Tyr
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 Arg Asp Asp Met Arg Gly Ile Met Lys Lys Lys Ala Ser Gly Asp Leu
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 Gly Leu Thr Gly Trp Leu Ile Leu Asp Pro Asp Glu Leu Lys Ser Phe
 165 170 175
 Pro Asp Tyr Leu Thr Glu Met Thr Gln Leu Gln Glu Asp Met Glu Glu
 180 185 190
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 195 200 205
 Ala Ala Ala Asn Gln Phe Pro His Lys Ile Ile Leu Arg Pro Ala Tyr
 210 215 220
 Gly Thr Val Pro Ile Ala Met Tyr Leu Asp Thr Arg Glu Asp His Asn
 225 230 235 240
 Ala Tyr Leu Cys Leu Ser Leu Lys Thr Lys Ala His Met Val Asn Met
 245 250 255
 Ile Arg Arg Met Cys Tyr Ser Gly Met Pro Ala Asn Ile Ile Lys Met
 260 265 270
 Thr Gln Gly Met Ala Leu Ser Gly Met Glu Glu Met Thr Phe Arg Ser
 275 280 285
 Gly His Arg Leu Phe Gly His Met His Ser Gly His Thr Ile Pro Val
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 <213> Viruses

<220>
 <223> S1 S3 NOR1988

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 35 40 45
 Ser Leu Arg Ile Cys Val Glu Cys Gly His Arg Val Gly Leu Ser His
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 Asn Ala Lys Pro Thr Met Val Thr His Gln Cys Asp Gly Glu Thr Leu
 65 70 75 80
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 Phe Val Thr Ser Cys Ala Asn Ala Leu Ser Ala Asn Ala Asp Ala Tyr
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 115 120 125
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 Arg Asp Asp Met Arg Gly Ile Met Lys Lys Lys Ala Ser Gly Asp Leu
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 Gly Leu Thr Gly Trp Leu Ile Leu Asp Pro Asp Glu Leu Lys Ser Phe
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 Pro Asp Tyr Ser Thr Glu Met Thr Gln Leu Gln Glu Asp Met Glu Glu
 180 185 190
 Leu Asn Pro Val Glu Gln Lys Thr Gly Asn Gly Gly Lys Val His Val
 195 200 205
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 Gly Thr Val Pro Ile Val Met Tyr Leu Asp Thr Arg Glu Asp His Asn
 225 230 235 240
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Thr Ser Ser Glu Trp Ile Pro Gly Thr Ser Lys Phe Val Arg Val Gly				
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Ser Leu Arg Ile Cys Val Glu Cys Gly His Arg Val Gly Leu Ser His				
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Asn Ala Lys Pro Thr Met Val Thr His Gln Cys Asp Gly Glu Thr Leu				
65	70		75	80
Trp Asp His Ser Ala Pro Gly Asp Trp Thr Trp Ser Glu Trp Ser Tyr				
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Phe Val Thr Ser Cys Ala Asn Ala Leu Ser Ala Asn Ala Asp Ala Tyr				
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Leu Arg Ile Leu Thr Asp Lys Trp Thr Glu Asp Asn Ser Arg Gly Ser				
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Asn Asp Arg Pro Asp Arg Arg Gly Ile Ile Glu Ala Lys Arg Arg Leu				
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Arg Asp Asp Met Arg Gly Ile Met Lys Lys Lys Ala Ser Gly Asp Leu				
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Gly Leu Thr Gly Trp Leu Ile Leu Asp Pro Asp Glu Leu Lys Ser Phe				
	165		170	175
Pro Asp Tyr Ser Thr Glu Met Thr Gln Leu Gln Glu Asp Met Glu Glu				
	180		185	190
Leu Asn Pro Val Glu Gln Lys Thr Gly Asn Gly Gly Lys Val His Val				
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Ala Ala Ala Asn Gln Phe Pro His Lys Ile Ile Leu Arg Pro Ala Tyr				
	210		215	220
Gly Thr Val Pro Ile Val Met Tyr Leu Asp Thr Arg Glu Asp His Asn				
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Ile Arg Arg Met Cys Tyr Ser Gly Met Pro Ala Asn Ile Ile Lys Met				
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Gly	His	Arg	Leu	Phe	Gly	His	Met	His	Ser	Gly	His	Thr	Ile	Pro	Val
		290				295					300				
Lys	Gly	Thr	Ser	Ser	Leu	Thr	Leu	Thr	Ser	Gly	Lys	Cys	Ser	His	Thr
305					310					315					320
Cys	Gln	Asn	Leu	Leu	Lys	Trp	Ser	Ser	Ala						
			325						330						

<210> 25
 <211> 330
 <212> PRT
 <213> Viruses

<220>
 <223> S1 S3 NOR1997, NOR2018NL, NOR2018SF

<400> 25

Met	Ala	Asn	His	Arg	Thr	Ala	Thr	Thr	Thr	Asp	Phe	Ser	Asp	Phe	Ile
1			5						10					15	
Glu	Ser	Thr	Leu	His	Gly	Asn	Ile	Ile	Phe	Tyr	Asp	Asp	Gln	His	Asn
			20					25					30		
Thr	Ser	Ser	Glu	Trp	Ile	Pro	Gly	Thr	Ser	Lys	Phe	Val	Arg	Val	Gly
		35					40					45			
Ser	Leu	Arg	Ile	Cys	Val	Glu	Cys	Gly	His	Arg	Val	Gly	Leu	Ser	His
50						55					60				
Asn	Ala	Lys	Pro	Val	Met	Val	Thr	His	Gln	Cys	Asp	Gly	Asp	Thr	Leu
65					70					75					80
Trp	Asp	His	Ser	Thr	Pro	Gly	Asp	Trp	Thr	Trp	Ser	Glu	Trp	Ser	Tyr
				85					90					95	
Phe	Val	Thr	Ser	Cys	Ala	Asn	Ala	Leu	Ser	Ala	Asn	Ala	Asp	Ala	Tyr
			100					105					110		
Leu	Arg	Ile	Leu	Asn	Asp	Lys	Trp	Thr	Glu	Asp	Asn	Ser	Arg	Gly	Ser
		115					120					125			
Asn	Asp	Arg	Pro	Asp	Arg	Arg	Gly	Val	Ile	Glu	Ala	Lys	Arg	Arg	Leu
130						135						140			
Arg	Asp	Asp	Met	Arg	Gly	Ile	Met	Lys	Lys	Lys	Thr	Ala	Gly	Asp	Leu
145					150					155					160
Gly	Leu	Thr	Gly	Trp	Leu	Ile	Leu	Asp	Pro	Asp	Glu	Leu	Glu	Ser	Phe
				165					170					175	
Pro	Asp	Tyr	Ser	Thr	Glu	Met	Thr	Gln	Leu	Gln	Glu	Asp	Met	Glu	Glu
			180					185					190		
Leu	Asn	Pro	Val	Glu	Gln	Lys	Thr	Gly	Asn	Gly	Gly	Lys	Ala	His	Val
		195						200					205		
Ala	Ala	Ala	Asn	Gln	Phe	Pro	His	Lys	Val	Ile	Leu	Arg	Pro	Ala	Tyr
		210					215						220		
Gly	Thr	Val	Pro	Ile	Val	Met	Tyr	Leu	Asp	Thr	Arg	Glu	Asp	His	Asn
225					230					235					240
Ala	Tyr	Leu	Cys	Leu	Ser	Leu	Lys	Thr	Lys	Ala	His	Met	Val	Asn	Met

	245		250		255										
Ile	Arg	Arg	Met	Cys	Tyr	Ser	Gly	Met	Pro	Ala	Asn	Ile	Ile	Lys	Met
	260		265		270										
Thr	Gln	Gly	Met	Ala	Leu	Ser	Gly	Met	Glu	Glu	Met	Thr	Phe	Arg	Ser
	275		280		285										
Gly	His	Arg	Leu	Phe	Gly	His	Met	His	Ser	Gly	His	Thr	Ile	Pro	Val
	290		295		300										
Lys	Gly	Thr	Ser	Ser	Leu	Thr	Leu	Thr	Ser	Gly	Lys	Cys	Ser	His	Thr
305			310		315									320	
Cys	Gln	Asn	Leu	Leu	Lys	Trp	Ser	Ser	Ala						
	325		330												

<210> 26
 <211> 134
 <212> PRT
 <213> Viruses

<220>
 <223> S1 P13 CAN BC

<400> 26															
Asn	Gln	Leu	Tyr	Thr	Gly	Ile	Leu	Ser	Ser	Met	Thr	Thr	Asn	Ile	Thr
1			5						10					15	
Leu	Gln	Ala	Ser	Gly	Ser	Leu	Val	Pro	Val	Ser	Leu	Leu	Gly	Ser	Val
		20						25					30		
His	Phe	Glu	Tyr	Val	Leu	Asn	Ala	Gly	Ile	Gly	Leu	Val	Cys	Leu	Ile
	35						40					45			
Thr	Leu	Ser	Leu	Leu	Trp	Ser	Leu	Ile	Asn	Ala	Met	Ala	Lys	Arg	Cys
	50					55					60				
Gly	Ile	Ile	Leu	His	Pro	Glu	Ile	Gly	His	Gly	Val	Asn	Gly	Ala	Ile
65				70					75					80	
Ser	Ser	Leu	Ala	Ala	Arg	Met	Pro	Phe	Leu	Gln	Thr	Gln	Thr	Leu	Thr
		85						90					95		
Ser	Glu	Ser	Ser	Leu	Thr	Asn	Gly	Gln	Lys	Thr	Thr	Val	Ala	Val	Gln
	100						105					110			
Thr	Thr	Asp	Gln	Thr	Asp	Ala	Glu	Ser	Leu	Lys	Leu	Ser	Asp	Ala	Leu
	115					120						125			
Glu	Thr	Ile	Cys	Val	Ala										
	130														

<210> 27
 <211> 134
 <212> PRT
 <213> Viruses

<220>
 <223> S1 P13 NOR1988

<400> 27

```
Asn Gln Leu Tyr Thr Gly Ile Leu Ser Ser Met Thr Thr Asn Ile Thr
1           5           10           15
Leu Gln Ala Ser Gly Ser Leu Val Pro Val Ser Leu Leu Gly Ser Val
           20           25           30
Pro Phe Glu Tyr Val Leu Asn Ala Gly Ile Gly Leu Val Cys Leu Ile
           35           40           45
Thr Leu Ser Leu Leu Trp Ser Leu Ile Asn Ala Met Ala Lys Arg Cys
           50           55           60
Gly Ile Ile Leu His Pro Glu Ile Gly His Gly Val Asn Gly Ala Ile
65           70           75           80
Ser Ser Leu Ala Ala Arg Met Pro Phe Leu Gln Thr Gln Thr Leu Thr
           85           90           95
Ser Glu Ser Ser Leu Thr Asn Gly Gln Lys Thr Thr Val Ala Val Gln
           100          105          110
Thr Thr Asp Gln Thr Asp Ala Glu Ser Leu Lys Leu Ser Asp Ala Leu
           115          120          125
Glu Thr Ile Cys Val Ala
           130
```

<210> 28

<211> 134

<212> PRT

<213> Viruses

<220>

<223> S1 P13 NOR1996

<400> 28

```
Asn Gln Leu Tyr Thr Gly Ile Leu Ser Ser Met Thr Thr Asn Ile Thr
1           5           10           15
Leu Gln Ala Ser Gly Ser Leu Val Pro Val Ser Leu Leu Gly Ser Val
           20           25           30
Pro Phe Glu Tyr Val Leu Asn Ala Gly Ile Gly Leu Val Cys Leu Ile
           35           40           45
Thr Leu Ser Leu Leu Trp Ser Leu Ile Asn Ala Met Ala Lys Arg Cys
           50           55           60
Gly Ile Ile Leu His Pro Glu Ile Gly His Gly Val Asn Gly Ala Ile
65           70           75           80
Ser Ser Leu Ala Ala Arg Met Pro Phe Leu Gln Thr Gln Thr Leu Thr
           85           90           95
Ser Glu Ser Ser Leu Thr Ser Gly Gln Lys Thr Thr Val Ala Val Gln
           100          105          110
Thr Thr Asp Gln Thr Asp Ala Glu Ser Leu Lys Leu Ser Asp Gly Leu
           115          120          125
Glu Thr Ile Cys Val Ala
           130
```

<210> 29

<211> 134
<212> PRT
<213> Viruses

<220>

<223> S1 P13 NOR1997, NOR2018NL, NOR2018SF

<400> 29

```
Asn Gln Leu Tyr Thr Gly Ile Leu Ser Ser Met Thr Thr Asn Ile Thr
1           5           10           15
Leu Gln Ala Ser Gly Ser Leu Val Pro Ala Ser Leu Leu Gly Ser Val
           20           25           30
Pro Phe Glu Tyr Val Leu Asn Ala Gly Ile Gly Leu Val Cys Leu Ile
           35           40           45
Met Leu Ser Leu Leu Trp Ser Leu Ile Asn Ala Thr Ala Ile Arg Cys
           50           55           60
Gly Ile Ile Leu His Pro Glu Ile Gly His Gly Val Asn Gly Ala Ile
65           70           75           80
Ser Ser Leu Val Ala Gln Met Pro Phe Leu Arg Thr Gln Thr Leu Thr
           85           90           95
Ser Glu Ser Ser Met Thr Asn Gly Gln Lys Thr Thr Val Ala Val Gln
           100          105          110
Thr Thr Asp Gln Thr Asp Ala Glu Ser Leu Lys Leu Ser Asp Ala Leu
           115          120          125
Glu Thr Ile Cys Val Ala
           130
```

<210> 30
<211> 717
<212> PRT
<213> Viruses

<220>

<223> M2 CAN BC, NOR1996 Xaa = unknown or other

<400> 30

```
Met Gly Asn Tyr Gln Thr Ser Asn Asn Gln Phe Trp Val Thr Gly Asp
1           5           10           15
Gly Asn Asp Phe Ser Ala Glu Gly Gly Leu Asp Ser Thr Asn Ala Ala
           20           25           30
Ser Leu Asp Phe Lys Ala Gly Lys Thr Asn Pro Gly Gly His Met Tyr
           35           40           45
Val Ile Ser Gly Asp Asn Thr Ser Asp Val Val Lys Trp Asp Ser Leu
           50           55           60
Thr Pro Leu Tyr Gly Ile Asp Gly Gln Met Val Val Val Leu Thr Ala
65           70           75           80
Val Ala Met Ser Thr Phe Glu Lys Met Val Asn Leu Ile Glu Met Tyr
           85           90           95
```

Arg	Pro	Leu	Leu	Glu	Ala	Ser	Gln	Gln	Met	Ala	Cys	Tyr	Arg	Asp	Trp
		100						105					110		
Lys	Lys	Asp	Ile	Val	Leu	Leu	Asp	Gly	Tyr	Val	Gly	Ser	Thr	Pro	Gln
		115						120				125			
Ser	Ala	Val	Thr	Asn	Phe	Val	Thr	Gly	Ala	Ser	Val	Ile	Asn	Leu	Arg
		130					135				140				
Glu	Leu	Arg	Ser	Leu	Gly	Lys	Met	Tyr	Gln	Asn	Ile	Leu	Gly	Val	Ile
145					150					155					160
Ala	Asn	Tyr	Asp	Arg	Asp	Ile	Gln	Val	Ala	Leu	Ser	Leu	Ile	Pro	His
			165					170					175		
Ser	Thr	Pro	Ile	Gly	Ser	Leu	Ser	Ala	Asp	Met	His	Ser	Ile	Leu	Arg
		180						185					190		
Met	Phe	Ser	Leu	Ser	Leu	Lys	Pro	Thr	Asn	Val	Cys	Tyr	Leu	Tyr	Pro
		195					200					205			
Glu	Ala	Ala	Leu	Gln	Val	Ile	Arg	Ala	Ile	Ser	Pro	Thr	Val	Arg	Asn
		210				215					220				
Val	Asp	Thr	Gln	Gln	Gly	Gly	Ser	Ile	Val	Glu	Thr	Leu	Asn	Leu	Phe
225					230					235					240
Glu	Pro	Val	Phe	Asn	Gly	Thr	Gly	Pro	Asn	Gln	Pro	Pro	Leu	Thr	Asp
			245					250					255		
Gln	Ser	Glu	Val	Arg	Ala	Ile	Ala	Arg	Ser	Asp	Ala	Ser	Leu	Ala	Gln
		260						265					270		
Leu	Ser	Leu	Ile	Ser	Ser	Thr	Glu	Pro	Ile	Glu	Ala	Arg	Ala	Leu	Lys
		275					280					285			
Ser	Gly	Thr	Pro	Thr	Lys	Thr	Tyr	Asp	Ile	Arg	Leu	Val	Asp	Pro	Leu
		290				295					300				
Thr	Thr	Pro	Trp	Val	Ser	Lys	Ala	Tyr	Ala	Leu	Ala	Glu	Lys	Thr	Ala
305					310					315					320
Arg	Ile	Gln	Phe	Thr	Asp	Ser	Gly	Arg	Lys	Thr	Trp	Tyr	Thr	Ala	Val
			325					330					335		
Gly	Lys	Gly	Thr	Leu	Ala	Leu	His	Leu	Asp	Asp	Ile	Thr	Ser	Met	Ser
		340						345				350			
Ile	Thr	Met	Asp	Leu	Gly	Gly	Glu	Ser	Tyr	Tyr	Tyr	Lys	Thr	Leu	Ala
		355					360					365			
Asn	Asn	Ala	Ala	Glu	Thr	Val	Asp	Pro	Glu	Ser	Ala	Thr	Val	Ala	Phe
		370				375					380				
Ile	Leu	Phe	Ser	Val	Thr	Arg	Pro	Leu	Glu	Glu	Ile	Thr	Thr	Ala	Ser
385					390					395					400
Glu	Leu	Gln	Thr	Gly	Lys	Ile	Val	Ala	Phe	Glu	Lys	Leu	Met	Val	Ala
			405					410					415		
Asn	Ser	Ser	Val	Gln	Gly	Ala	Lys	Ile	Ile	Ala	Asn	Thr	Ser	Leu	Lys
		420						425				430			
Tyr	Asn	Phe	Asp	His	Asn	Ser	Ile	Ser	Gly	Asp	Lys	Ser	Glu	Leu	Asn
		435					440					445			
His	Tyr	Leu	Leu	Cys	Gln	Leu	Leu	Phe	Asn	Asn	Leu	Ser	Ala	Ser	Thr
		450				455					460				
Thr	Tyr	Thr	Gln	Gln	Asp	Ala	Trp	Ala	Gly	Lys	Thr	Thr	Met	Gln	Ser
465					470					475					480
Leu	Asp	Ser	Asp	Lys	Val	Thr	Val	Lys	Gly	Val	Glu	Val	Asp	Arg	Val
			485					490					495		

Ile	Pro	Ala	Gly	Ala	Phe	Gly	Asn	Tyr	Thr	Thr	Ala	Glu	Gln	Lys	Ser	
			500						505						510	
Ser	Leu	Pro	Asn	Asp	Leu	His	Ser	Val	Met	Ala	Thr	His	Leu	Glu	Arg	
			515						520						525	
Ala	Ala	Lys	Ala	Met	Thr	Ala	Ile	Asp	Asp	Glu	Asp	Gln	Glu	Gly	Gly	
			530						535						540	
Ser	Thr	Val	Ala	Asn	Ala	Ile	Phe	Gly	Ala	Leu	Ile	Ser	Lys	Glu	Ser	
545						550						555			560	
Pro	Val	Ala	Gly	Pro	Ile	Pro	Trp	Lys	Asn	Ile	Lys	Phe	Asp	Glu	Leu	
			565						570						575	
Arg	Val	Leu	Ser	Asp	Lys	Ala	Ala	Ser	Ser	Phe	Lys	Arg	Asp	Pro	Ser	
			580						585						590	
Gln	Ala	Leu	Ile	Ser	His	Asp	Pro	Val	Leu	Gly	Asp	Ser	Ala	Val	Met	
			595						600						605	
Thr	Ser	Leu	Leu	Gly	Gly	Ile	Gly	Asn	Ala	Val	Lys	Thr	Lys	Gly	Leu	
610						615						620				
Ser	Ala	Ala	Cys	Lys	Asp	Thr	Lys	Ser	Ala	Leu	Thr	Ala	Ala	Gln	Ser	
625						630						635			640	
Gly	Arg	Ser	Val	Arg	Gln	Thr	Ile	Leu	Asp	Lys	Ile	Glu	Lys	Leu	Phe	
			645						650						655	
Pro	Pro	Gly	Pro	Arg	Pro	Ala	Lys	Lys	Met	Ile	Glu	Glu	Gly	Pro	Ser	
			660						665						670	
Lys	Lys	Glu	Ala	Arg	Arg	Leu	Gly	Asp	Ser	Arg	Arg	Gly	Gln	Lys	Xaa	
675						680						685				
Val	Pro	Ala	Pro	Pro	Trp	Gln	Tyr	Val	Val	Arg	Asp	Asn	Gly	Ala	Leu	
690						695						700				
Arg	Pro	Val	Xaa	Arg	Val	Thr	Pro	Asn	Asn	Lys	Ser	Ser				
705						710						715				

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<210> 31
<211> 717
<212> PRT
<213> Viruses
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<400> 31
Met Gly Asn Tyr Gln Thr Ser Asn Asn Gln Phe Trp Val Thr Gly Asp
1          5          10          15
Gly Asn Asp Phe Ser Ala Glu Gly Gly Leu Asp Ser Thr Asn Ala Ala
          20          25          30
Ser Leu Asp Phe Lys Ala Gly Lys Thr Asn Pro Gly Gly His Met Tyr
          35          40          45
Val Ile Ser Gly Asp Asn Thr Ser Asp Val Val Lys Trp Asp Ser Leu
          50          55          60
Thr Pro Leu Tyr Gly Ile Asp Gly Gln Met Val Val Val Leu Thr Ala
65          70          75          80
Val Ala Met Ser Thr Phe Glu Lys Met Val Asn Leu Ile Glu Met Tyr

```


	485		490		495										
Ile	Pro	Ala	Gly	Ala	Phe	Gly	Asn	Tyr	Thr	Thr	Ala	Glu	Gln	Lys	Ser
	500							505					510		
Ser	Leu	Pro	Asn	Asp	Leu	His	Ser	Val	Met	Ala	Thr	His	Leu	Glu	Arg
	515							520					525		
Ala	Ala	Lys	Ala	Met	Thr	Ala	Ile	Asp	Asp	Glu	Asp	Gln	Glu	Gly	Gly
	530						535					540			
Ser	Thr	Val	Ala	Asn	Ala	Ile	Phe	Gly	Ala	Leu	Ile	Ser	Lys	Glu	Ser
545					550					555					560
Pro	Val	Ala	Gly	Pro	Ile	Pro	Trp	Lys	Asn	Ile	Lys	Phe	Asp	Glu	Leu
			565						570					575	
Arg	Val	Leu	Ser	Asp	Lys	Ala	Ala	Ser	Ser	Phe	Lys	Arg	Asp	Pro	Ser
	580								585				590		
Gln	Ala	Leu	Ile	Ser	His	Asp	Pro	Val	Leu	Gly	Asp	Ser	Ala	Val	Met
	595						600					605			
Thr	Ser	Leu	Leu	Gly	Gly	Ile	Gly	Asn	Ala	Val	Lys	Thr	Lys	Gly	Leu
	610						615					620			
Ser	Ala	Ala	Cys	Lys	Asp	Thr	Lys	Ser	Ala	Leu	Thr	Ala	Ala	Gln	Ser
625					630					635					640
Gly	Arg	Ser	Val	Arg	Gln	Thr	Ile	Leu	Asp	Lys	Ile	Glu	Lys	Leu	Phe
			645						650					655	
Pro	Pro	Gly	Pro	Arg	Pro	Ala	Lys	Lys	Met	Ile	Glu	Glu	Gly	Pro	Ser
		660						665					670		
Lys	Lys	Glu	Ala	Arg	Arg	Leu	Gly	Asp	Ser	Arg	Arg	Gly	Gln	Lys	Xaa
	675						680					685			
Val	Pro	Ala	Pro	Pro	Trp	Gln	Tyr	Val	Val	Arg	Asp	Asn	Gly	Ala	Leu
	690					695				700					
Arg	Pro	Val	Xaa	Arg	Val	Thr	Pro	Asn	Asn	Lys	Ser	Ser			
705				710						715					

<210> 32

<211> 717

<212> PRT

<213> Viruses

<220>

<223> M2 NOR1997, NOR2018NL, NOR2018SF, Xaa= unknown or other

<400> 32

Met	Gly	Asn	Tyr	Gln	Thr	Ser	Asn	Asn	Gln	Phe	Trp	Val	Thr	Gly	Asp
1				5					10					15	
Gly	Asn	Asp	Phe	Ser	Ala	Glu	Gly	Gly	Leu	Asp	Ser	Thr	Asn	Ala	Ala
			20					25					30		
Ser	Leu	Asp	Phe	Lys	Ala	Gly	Lys	Thr	Asn	Pro	Gly	Gly	His	Met	Tyr
		35					40					45			
Val	Ile	Ser	Gly	Asp	Asn	Thr	Ser	Asp	Val	Val	Lys	Trp	Asp	Ser	Leu
	50				55						60				
Thr	Pro	Leu	Tyr	Gly	Ile	Asp	Gly	Gln	Met	Val	Val	Val	Leu	Thr	Ala
65					70					75					80

Val	Ala	Met	Ser	Thr	Phe	Glu	Lys	Met	Val	Asn	Leu	Ile	Glu	Met	Tyr	85	90	95
Arg	Pro	Leu	Leu	Glu	Ala	Ser	Gln	Gln	Met	Ala	Cys	Tyr	Arg	Asp	Trp	100	105	110
Lys	Lys	Asp	Ile	Val	Leu	Leu	Asp	Gly	Tyr	Val	Gly	Ser	Thr	Pro	Gln	115	120	125
Ser	Ala	Val	Thr	Asn	Phe	Val	Thr	Gly	Ala	Ser	Val	Ile	Asn	Leu	Arg	130	135	140
Glu	Leu	Arg	Ser	Leu	Gly	Lys	Met	Tyr	Gln	Asn	Ile	Leu	Gly	Val	Ile	145	150	155
Ala	Asn	Tyr	Asp	Arg	Asp	Ile	Gln	Val	Ala	Leu	Ser	Leu	Ile	Pro	His	165	170	175
Ser	Thr	Pro	Ile	Gly	Ser	Leu	Thr	Ala	Asp	Met	His	Ser	Ile	Leu	Arg	180	185	190
Met	Phe	Ser	Leu	Ser	Leu	Lys	Pro	Thr	Asn	Val	Cys	Tyr	Leu	Tyr	Pro	195	200	205
Glu	Ala	Ala	Leu	Gln	Val	Ile	Arg	Ala	Ile	Ser	Pro	Thr	Val	Arg	Asn	210	215	220
Val	Asp	Thr	Gln	Gln	Gly	Gly	Ser	Ile	Val	Glu	Thr	Leu	Asn	Leu	Phe	225	230	235
Glu	Pro	Val	Phe	Asn	Gly	Thr	Gly	Pro	Asn	Gln	Pro	Pro	Leu	Thr	Asp	245	250	255
Gln	Ser	Glu	Val	Arg	Ser	Ile	Ala	Arg	Ser	Asp	Ala	Ser	Leu	Ala	Gln	260	265	270
Leu	Ser	Leu	Ile	Ser	Ser	Thr	Glu	Pro	Ile	Glu	Ala	Arg	Ala	Leu	Lys	275	280	285
Ser	Gly	Thr	Pro	Thr	Lys	Thr	Tyr	Asp	Ile	Arg	Leu	Val	Asp	Pro	Leu	290	295	300
Thr	Thr	Pro	Trp	Val	Ser	Lys	Ala	Tyr	Ala	Leu	Ala	Glu	Lys	Thr	Ala	305	310	315
Arg	Ile	Gln	Phe	Thr	Asp	Ser	Gly	Arg	Lys	Thr	Trp	Tyr	Thr	Ala	Val	325	330	335
Gly	Lys	Gly	Thr	Leu	Ala	Leu	His	Leu	Asp	Asp	Ile	Thr	Ser	Met	Ser	340	345	350
Ile	Thr	Met	Asp	Leu	Gly	Gly	Glu	Ser	Tyr	Tyr	Tyr	Lys	Thr	Leu	Ala	355	360	365
Asn	Asp	Ala	Ala	Glu	Thr	Val	Asp	Pro	Glu	Ser	Ala	Thr	Val	Ala	Phe	370	375	380
Ile	Leu	Phe	Ser	Val	Thr	Arg	Pro	Leu	Glu	Glu	Ile	Thr	Thr	Ala	Ser	385	390	395
Glu	Leu	Gln	Thr	Gly	Lys	Ile	Val	Ala	Phe	Glu	Lys	Leu	Met	Val	Ala	405	410	415
Asn	Ser	Ser	Val	Gln	Gly	Ala	Lys	Ile	Ile	Ala	Asn	Thr	Ser	Leu	Lys	420	425	430
Tyr	Asn	Phe	Asp	His	Asn	Ser	Ile	Ser	Gly	Asp	Lys	Ser	Glu	Leu	Asn	435	440	445
His	Tyr	Leu	Leu	Cys	Gln	Leu	Leu	Phe	Asn	Asn	Leu	Ser	Ala	Ser	Thr	450	455	460
Thr	Tyr	Thr	Gln	Gln	Asp	Ala	Trp	Ala	Gly	Lys	Thr	Thr	Met	Gln	Ser	465	470	475
																		480

Leu Asp Ser Asp Lys Val Thr Val Lys Gly Val Glu Val Asp Arg Val
 485 490 495
 Ile Pro Ala Gly Ala Phe Gly Asn Tyr Thr Thr Ala Glu Gln Lys Ser
 500 505 510
 Ser Leu Pro Asn Asp Leu His Ser Val Met Ala Thr His Leu Glu Arg
 515 520 525
 Ala Ala Lys Ala Met Thr Ala Ile Asp Asp Glu Asp Gln Glu Gly Gly
 530 535 540
 Ser Thr Val Ala Asn Ala Ile Phe Gly Ala Leu Ile Ser Lys Glu Ser
 545 550 555 560
 Pro Val Ala Gly Pro Ile Pro Trp Lys Asn Ile Lys Phe Asp Glu Leu
 565 570 575
 Arg Val Leu Ser Asp Lys Ala Ala Ser Ser Phe Lys Arg Asp Pro Ser
 580 585 590
 Gln Ala Leu Ile Ser His Asp Pro Val Leu Gly Asp Ser Ala Val Met
 595 600 605
 Thr Ser Leu Leu Gly Gly Ile Gly Asn Ala Val Lys Thr Lys Gly Leu
 610 615 620
 Ser Ala Ala Cys Lys Asp Thr Lys Ser Ala Leu Thr Ala Ala Gln Ser
 625 630 635 640
 Gly Arg Ser Val Arg Gln Thr Ile Leu Asp Lys Ile Glu Lys Leu Phe
 645 650 655
 Pro Pro Gly Pro Arg Pro Ala Lys Lys Met Ile Glu Glu Gly Pro Ser
 660 665 670
 Lys Lys Glu Ala Arg Arg Leu Gly Asp Ser Arg Arg Gly Gln Lys Xaa
 675 680 685
 Val Pro Ala Pro Pro Trp Gln Tyr Val Val Arg Asp Asn Gly Ala Leu
 690 695 700
 Arg Pro Val Xaa Arg Val Thr Pro Asn Asp Lys Ser Ser
 705 710 715

<210> 33

<211> 1286

<212> PRT

<213> Viruses

<220>

<223> L1 CAN BC, NOR 1996, NOR2018NL, NOR2018SF

<400> 33

Met Glu Lys Pro Lys Ala Leu Val Asn Gln Leu Pro Glu Asp Leu Lys
 1 5 10 15
 Asn Leu Ser Val Ala Leu Ser Gly Thr Ile Glu Leu Thr Ala Asp Ile
 20 25 30
 Trp Thr Asn Ala Ser Lys Thr Phe Arg Thr Thr Gln Arg His Glu Val
 35 40 45
 Tyr Asp Ile Ile Asn Lys Ile Glu Phe Ile Asp Ser Phe Leu Val Pro
 50 55 60
 Ser Ser Leu Phe Gln Pro Pro Pro His Lys Arg Tyr Trp Asp Val Asp

65		70		75		80
Val Arg Gln Arg Val Val Arg Val Pro Lys Cys Ala Val Pro Asp Asp						
	85		90		95	
Val Tyr Leu Pro His Ala Asn Leu Thr Asp Val Leu Glu Ile Asn Thr						
	100		105		110	
Glu Ser Ile His Lys Tyr Gly Gln Leu Arg Lys Glu Ile Gln Ala Ala						
	115		120		125	
Ala Lys Arg Leu Asp Pro Thr Ala Arg Ile Ala Glu Thr Phe Tyr Asn						
	130		135		140	
Leu Ser Val Tyr Gln Ala Asn Gln Ile Lys Phe Pro Leu Glu Arg Phe						
145		150		155		160
Leu Leu Cys Leu Val Val Ser Tyr Ala His Glu Leu Ser Pro Ser Pro						
	165		170		175	
Leu Leu Ile Asp Glu Gln Asn Val Asn Phe Leu Thr Ile Glu Ala Asn						
	180		185		190	
Pro Ala Leu Ser Ala Leu Lys Thr Ile Met Leu His Phe Met Glu Tyr						
	195		200		205	
Gly Lys Tyr Lys Pro Pro Phe Leu Lys Thr Ser Arg Asp Ile Val Phe						
	210		215		220	
Ala Leu Tyr Asp Asp Lys Arg Pro Leu Ser Ser Gln Ile Ala Pro Leu						
225		230		235		240
Met Ile Asp Leu Val Asn Tyr Ala Ile Val Ile Tyr Ser Cys Asn Ile						
	245		250		255	
Ser Arg Leu Ile Ser Val Pro Thr Val Arg Met Met Leu Lys Ala Ala						
	260		265		270	
Gly Thr Thr Ser Tyr Asn His Thr Gln Leu Lys Leu Lys Lys Ile Ile						
	275		280		285	
Pro Ala Ala Ser Leu Leu Ser Val Tyr His Gly Glu Thr Val Gly Arg						
	290		295		300	
Val Pro Ile Val Val Trp Glu Glu Pro Arg Glu Glu Tyr Arg Phe Arg						
305		310		315		320
Leu Asp Gly Ala Arg Asp Leu Pro Arg Gly Trp Lys Asn Glu Leu Gln						
	325		330		335	
Gly Ala Lys Lys Ala Ile Glu Asp Ala Ser Asp Leu Ala Ser Ser Tyr						
	340		345		350	
Gly Met Thr Ala Glu Phe Glu Glu Leu Arg Ser Gln Tyr Ser Lys Ile						
	355		360		365	
Ser Val His Asn Gly Val Gly Met Lys Met Ile Arg Asp Ala Leu Ala						
	370		375		380	
Gly Val Ser Ser Val Phe Ile Thr Arg Thr Pro Thr Asp Thr Val Leu						
385		390		395		400
Gln Glu Tyr Val His Ala Pro Val Ile Glu Arg Pro Ile Pro Pro Gln						
	405		410		415	
Asp Trp Thr Asp Pro Val Gly Val Val Lys Tyr Leu Lys Asn Asp Thr						
	420		425		430	
Gln His Tyr Val Ala Arg Asn Leu Tyr Ala Thr Trp Arg Glu Ala Ala						
	435		440		445	
Val Gln Val Ala Asn Asn Pro Asp Asn Trp Asp Pro Asn Thr Gln Ala						
	450		455		460	
Ile Leu Arg Ser Gln Tyr Val Thr Pro Arg Gly Gly Ser Gly Ser Ser						

465		470		475		480									
Val	Lys	Lys	Val	Leu	Thr	Asp	Lys	Gly	Val	Ile	Leu	Lys	Asn	Phe	Ser
		485						490						495	
Lys	Ser	Gly	Ala	Lys	Ser	Ser	Thr	Lys	Ile	Val	Gln	Ala	Ala	Gln	Leu
		500						505						510	
Ala	Ser	Ile	Pro	Phe	Thr	Gln	Tyr	Gln	Asp	Thr	Ile	Met	Ala	Pro	Val
		515						520					525		
Ser	His	Gly	Val	Arg	Ile	Gln	Val	Gln	Arg	Arg	Ser	Arg	Thr	Ile	Met
		530						535					540		
Pro	Phe	Ser	Val	Pro	Gln	Gln	Gln	Val	Ser	Ala	Pro	His	Thr	Leu	Cys
		545						550					555		560
Gly	Asn	Tyr	Ile	Asn	Lys	Phe	Leu	Asn	Lys	Ser	Thr	Thr	Ser	Gly	Ser
				565							570			575	
Asn	Val	Thr	Glu	Lys	Val	Ile	Pro	Leu	Gly	Ile	Phe	Ala	Ser	Ser	Pro
		580							585					590	
Pro	Thr	Arg	Ala	Val	Asn	Ile	Asp	Ile	Lys	Ala	Cys	Asp	Ser	Ser	Ile
		595						600						605	
Thr	Trp	Gly	Phe	Phe	Leu	Ser	Val	Ile	Cys	Gly	Ala	Met	His	Glu	Gly
		610						615						620	
Met	Asp	Gly	Ile	Asn	Val	Gly	Thr	Pro	Phe	Leu	Gly	Val	Pro	Ala	Thr
		625												630	
Leu	Val	Glu	Asp	Gly	Leu	Asp	Leu	Gly	Ile	Val	Gly	Thr	Arg	Ser	Ile
				645										650	
Ser	Gly	Met	Gln	Asn	Met	Val	Gln	Lys	Leu	Ser	Gln	Leu	Tyr	Glu	Arg
				660										665	
Gly	Phe	Glu	Tyr	Glu	Val	Lys	Asp	Ala	Phe	Ser	Pro	Gly	Asn	Ala	Phe
		675												680	
Thr	His	His	Thr	Thr	Thr	Phe	Pro	Ser	Gly	Ser	Thr	Ala	Thr	Ser	Thr
		690												695	
Glu	His	Thr	Ala	Asn	Asn	Ser	Thr	Met	Met	Lys	Thr	Phe	Leu	Met	His
		705												710	
Trp	Leu	Pro	Asn	His	Thr	Lys	Asp	Leu	Glu	Leu	Ile	Asp	Phe	Val	Lys
				725										730	
Lys	Leu	Asp	Val	Asn	Arg	Asn	Tyr	Val	Cys	Gln	Gly	Asp	Asp	Gly	Ile
				740										745	
Met	Ile	Leu	Pro	Thr	Asn	Asp	Gly	Arg	Pro	Ile	Ser	Ser	His	His	Val
				755										760	
Glu	Ser	Met	Leu	Glu	Leu	Leu	Ser	Val	Phe	Gly	Lys	Glu	Ser	Gly	Trp
		770												775	
Val	Phe	Asp	Ile	Glu	Phe	Asn	Gly	Ser	Ala	Glu	Tyr	Leu	Lys	Leu	Leu
		785												790	
Phe	Leu	Asn	Gly	Cys	Arg	Ile	Pro	Asn	Val	Gly	Arg	His	Pro	Val	Val
				805										810	
Gly	Lys	Glu	Arg	Ala	Ser	Arg	Asp	Gln	Asp	Val	Ile	Trp	Pro	Gly	Gly
				820										825	
Ile	Asp	Ala	Phe	Ile	Gly	Met	Tyr	Asn	Asn	Gly	Val	Glu	Asp	Gln	Phe
				835										840	
His	Trp	Arg	Arg	Trp	Leu	Lys	Phe	Ser	Trp	Ser	Met	Ala	Cys	Phe	Leu
				850										855	
Ser	Ser	Lys	Ala	Val	Phe	Ile	Lys	Gly	Lys	Ser	Asp	Val	Ile	Gln	Tyr
														860	

865	870	875	880
Pro Ser Trp Ser Phe Val Tyr Leu Gly Leu Pro Pro Ile Arg Ile Phe			
	885	890	895
Asp Ser Pro Pro Trp Ile Phe Ser Pro Tyr Thr Pro Gly Gly Asp Leu			
	900	905	910
Gly Met Tyr Ser Ile Met Val Thr Gly Lys Lys Tyr Ile Val Asp Arg			
	915	920	925
Met Gln Ser Ser Gly Tyr Gln Lys Asp Asn Thr Asp Leu Ser Asn Glu			
	930	935	940
Ser Thr Phe Phe Arg Gly Tyr Asp Tyr Val Lys Phe Met Asn Asp Cys			
945	950	955	960
Gly Val Leu Pro Gly Tyr Tyr Met Ser Gln Ile Pro Arg Ser Pro Asp			
	965	970	975
Lys Thr Lys Arg Lys Val Ile Gly Pro Glu Ser Arg Asp Leu Ile Asp			
	980	985	990
Ser Leu Arg Asn Tyr Leu Phe Ser Asp Gln Lys Leu Thr Ile Arg Val			
	995	1000	1005
Asn Tyr Gly His Arg Ile Val Thr Asp Tyr Pro Gly Arg Leu Pro Arg			
1010	1015	1020	
Lys Leu Pro Ser Leu Asp Asp Val Pro Gln Arg Trp Phe Asp Thr Ala			
1025	1030	1035	1040
Val Glu Ala Asp Met Ala Ser Thr Tyr Glu Ile Glu Ala Met Asp Val			
	1045	1050	1055
His Leu Leu Arg Gly Gln Phe Ser Arg Tyr Gln Ser Phe Ser Lys Val			
	1060	1065	1070
Leu Glu Ala Tyr Leu Ser Val Asp Trp Glu Leu Thr Asp Leu Asn Ile			
	1075	1080	1085
Pro Ala Gly Leu Ser Leu Asp Val Pro Leu Val Ala Gly Cys Asp Pro			
	1090	1095	1100
Thr Asn Gly Glu Pro Tyr Tyr Lys Met Met Gly Leu Gly Pro Met Met			
1105	1110	1115	1120
Glu Ser Ile Gln Thr Tyr Phe His Gly Thr Val Phe Met Ser Arg Ala			
	1125	1130	1135
Val Ser Gly Leu Asp Val Glu Ser Ile Asp Val Ala Leu Leu Lys Met			
	1140	1145	1150
Lys Ala Leu Lys Val Pro Thr Glu Val Ile Thr Gly Phe Leu Met Thr			
	1155	1160	1165
Cys Gly Leu Ser Lys Pro Lys Ala Ser Thr Val Ala Thr Lys Ile Asn			
	1170	1175	1180
Phe Gln Asp Met Lys Thr Val Gln Val Ala Lys Leu Thr Gly Leu Asn			
1185	1190	1195	1200
Val Ser Asp Lys Trp Met Ser Met Asn Phe Asp Arg Leu Leu His Ser			
	1205	1210	1215
Tyr Val Asp Val Lys Thr Tyr Val Ser Asp Ser Ser Asn Gln Ile Arg			
	1220	1225	1230
Leu Pro Gly Gly Ala Gly Trp Leu Arg Gly Val Ile Arg Phe Leu Gly			
	1235	1240	1245
Ala Gly Val Val Met Thr Arg Val Gly Pro Pro Gln Pro Val Arg Ile			
	1250	1255	1260
Ser Val Ile Tyr Gly Gly Gly Ala Arg Leu His Ser Lys Phe Leu Asn			

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 Trp Met Val Ser Asp Phe
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 20 25 30
 Trp Thr Asn Ala Ser Lys Thr Phe Arg Thr Thr Gln Arg His Glu Val
 35 40 45
 Tyr Asp Ile Ile Asn Lys Ile Glu Phe Ile Asp Ser Phe Leu Ala Pro
 50 55 60
 Ser Ser Leu Phe Gln Pro Pro Pro His Lys Arg Tyr Trp Asp Val Asp
 65 70 75 80
 Val Arg Gln Arg Val Val Arg Val Pro Lys Cys Ala Val Pro Asp Asp
 85 90 95
 Val Tyr Leu Pro His Ala Asn Leu Thr Asp Val Leu Glu Ile Asn Thr
 100 105 110
 Glu Ser Ile His Lys Tyr Gly Gln Leu Arg Lys Glu Ile Gln Ala Ala
 115 120 125
 Ala Lys Arg Leu Asp Pro Thr Ala Arg Ile Ala Glu Thr Phe Tyr Asn
 130 135 140
 Leu Ser Val Tyr Gln Ala Asn Gln Ile Lys Phe Pro Leu Glu Arg Phe
 145 150 155 160
 Leu Leu Cys Leu Val Val Ser Tyr Ala His Glu Leu Ser Pro Ser Pro
 165 170 175
 Leu Leu Ile Asp Glu Gln Asn Val Asn Phe Leu Thr Ile Glu Ala Asn
 180 185 190
 Pro Ala Leu Ser Ala Leu Lys Thr Ile Met Leu His Phe Met Glu Tyr
 195 200 205
 Gly Lys Tyr Lys Pro Pro Phe Leu Lys Thr Ser Arg Asp Ile Val Phe
 210 215 220
 Ala Leu Tyr Asp Asp Lys Arg Pro Leu Ser Ser Gln Ile Ala Pro Leu
 225 230 235 240
 Met Ile Asp Leu Val Asn Tyr Ala Ile Val Ile Tyr Ser Cys Asn Ile
 245 250 255
 Ser Arg Leu Ile Ser Val Pro Thr Val Arg Met Met Leu Lys Ala Ala
 260 265 270
 Gly Thr Thr Ser Tyr Asn His Thr Gln Leu Lys Leu Lys Lys Ile Ile
 275 280 285

Pro	Ala	Ala	Ser	Leu	Leu	Ser	Val	Tyr	His	Gly	Glu	Thr	Val	Gly	Arg	
290						295					300					
Val	Pro	Ile	Val	Val	Trp	Glu	Glu	Pro	Arg	Glu	Glu	Tyr	Arg	Phe	Arg	
305					310					315					320	
Leu	Asp	Gly	Ala	Arg	Asp	Leu	Pro	Arg	Gly	Trp	Lys	Asn	Glu	Leu	Gln	
				325					330					335		
Gly	Ala	Lys	Lys	Ala	Ile	Glu	Asp	Ala	Ser	Asp	Leu	Ala	Ser	Ser	Tyr	
			340					345					350			
Gly	Met	Thr	Ala	Glu	Phe	Glu	Glu	Leu	Arg	Ser	Gln	Tyr	Ser	Lys	Ile	
	355						360					365				
Ser	Val	His	Asn	Gly	Val	Gly	Met	Lys	Met	Ile	Arg	Asp	Ala	Leu	Ala	
	370					375					380					
Gly	Val	Ser	Ser	Val	Phe	Ile	Thr	Arg	Thr	Pro	Thr	Asp	Thr	Val	Leu	
385					390					395					400	
Gln	Glu	Tyr	Val	His	Ala	Pro	Val	Ile	Glu	Arg	Pro	Ile	Pro	Pro	Gln	
				405					410					415		
Asp	Trp	Thr	Asp	Pro	Val	Gly	Val	Val	Lys	Tyr	Leu	Lys	Asn	Asp	Thr	
			420					425					430			
Gln	His	Tyr	Val	Ala	Arg	Asn	Leu	Tyr	Ala	Thr	Trp	Arg	Glu	Ala	Ala	
	435						440					445				
Val	Gln	Val	Ala	Asn	Asn	Pro	Asp	Asn	Trp	Asp	Pro	Asn	Thr	Gln	Ala	
	450					455					460					
Ile	Leu	Arg	Ser	Gln	Tyr	Val	Thr	Pro	Arg	Gly	Gly	Ser	Gly	Ser	Ser	
465					470					475					480	
Val	Lys	Lys	Val	Leu	Thr	Asp	Lys	Gly	Val	Ile	Leu	Lys	Asn	Phe	Ser	
				485				490					495			
Lys	Ser	Gly	Ala	Lys	Ser	Ser	Thr	Lys	Ile	Val	Gln	Ala	Ala	Gln	Leu	
			500					505					510			
Ala	Ser	Ile	Pro	Phe	Thr	Gln	Tyr	Gln	Asp	Thr	Ile	Met	Ala	Pro	Val	
	515						520					525				
Ser	His	Gly	Val	Arg	Ile	Gln	Val	Gln	Arg	Arg	Ser	Arg	Thr	Ile	Met	
	530					535					540					
Pro	Phe	Ser	Val	Pro	Gln	Gln	Gln	Val	Ser	Ala	Pro	His	Thr	Leu	Cys	
545					550					555					560	
Gly	Asn	Tyr	Ile	Asn	Lys	Phe	Leu	Asn	Lys	Ser	Thr	Thr	Ser	Gly	Ser	
				565					570					575		
Asn	Val	Thr	Glu	Lys	Val	Ile	Pro	Leu	Gly	Ile	Phe	Ala	Ser	Ser	Pro	
			580					585					590			
Pro	Thr	Arg	Ala	Val	Asn	Ile	Asp	Ile	Lys	Ala	Cys	Asp	Ser	Ser	Ile	
	595						600					605				
Thr	Trp	Gly	Phe	Phe	Leu	Ser	Val	Ile	Cys	Gly	Ala	Met	His	Glu	Gly	
	610					615					620					
Met	Asp	Gly	Ile	Asn	Val	Gly	Thr	Pro	Phe	Leu	Gly	Val	Pro	Ala	Thr	
625					630					635					640	
Leu	Val	Glu	Asp	Gly	Leu	Asp	Leu	Gly	Ile	Val	Gly	Thr	Arg	Ser	Ile	
				645					650					655		
Ser	Gly	Met	Gln	Asn	Met	Val	Gln	Lys	Leu	Ser	Gln	Leu	Tyr	Glu	Arg	
			660					665				670				
Gly	Phe	Glu	Tyr	Glu	Val	Lys	Asp	Ala	Phe	Ser	Pro	Gly	Asn	Ala	Phe	
	675						680					685				

Thr	His	His	Thr	Thr	Thr	Phe	Pro	Ser	Gly	Ser	Thr	Ala	Thr	Ser	Thr	690	695	700
Glu	His	Thr	Ala	Asn	Asn	Ser	Thr	Met	Met	Lys	Thr	Phe	Leu	Met	His	705	710	715
Trp	Leu	Pro	Asn	His	Thr	Lys	Asp	Leu	Glu	Leu	Ile	Asp	Phe	Val	Lys	725	730	735
Lys	Leu	Asp	Val	Asn	Arg	Asn	Tyr	Val	Cys	Gln	Gly	Asp	Asp	Gly	Ile	740	745	750
Met	Ile	Leu	Pro	Thr	Asn	Asp	Gly	Arg	Pro	Ile	Ser	Ser	His	His	Val	755	760	765
Glu	Ser	Met	Leu	Glu	Leu	Leu	Ser	Val	Phe	Gly	Lys	Glu	Ser	Gly	Trp	770	775	780
Val	Phe	Asp	Ile	Glu	Phe	Asn	Gly	Ser	Ala	Glu	Tyr	Leu	Lys	Leu	Leu	785	790	795
Phe	Leu	Asn	Gly	Cys	Arg	Ile	Pro	Asn	Val	Gly	Arg	His	Pro	Val	Val	805	810	815
Gly	Lys	Glu	Arg	Ala	Ser	Arg	Asp	Gln	Asp	Val	Ile	Trp	Pro	Gly	Gly	820	825	830
Ile	Asp	Ala	Phe	Ile	Gly	Met	Tyr	Asn	Asn	Gly	Val	Glu	Asp	Gln	Phe	835	840	845
His	Trp	Arg	Arg	Trp	Leu	Lys	Phe	Ser	Trp	Ser	Met	Ala	Cys	Phe	Leu	850	855	860
Ser	Ser	Lys	Ala	Val	Phe	Ile	Lys	Gly	Lys	Ser	Asp	Val	Ile	Gln	Tyr	865	870	875
Pro	Ser	Trp	Ser	Phe	Val	Tyr	Leu	Gly	Leu	Pro	Pro	Ile	Arg	Ile	Phe	885	890	895
Asp	Ser	Pro	Pro	Trp	Ile	Phe	Ser	Pro	Tyr	Thr	Pro	Gly	Gly	Asp	Leu	900	905	910
Gly	Met	Tyr	Ser	Ile	Met	Val	Thr	Gly	Lys	Lys	Tyr	Ile	Val	Asp	Arg	915	920	925
Met	Gln	Ser	Ser	Gly	Tyr	Gln	Lys	Asp	Asn	Thr	Asp	Leu	Ser	Asn	Glu	930	935	940
Ser	Thr	Phe	Phe	Arg	Gly	Tyr	Asp	Tyr	Val	Lys	Phe	Met	Asn	Asp	Cys	945	950	955
Gly	Val	Leu	Pro	Gly	Tyr	Tyr	Met	Ser	Gln	Ile	Pro	Arg	Ser	Pro	Asp	965	970	975
Lys	Thr	Lys	Arg	Lys	Val	Ile	Gly	Pro	Glu	Ser	Arg	Asp	Leu	Ile	Asp	980	985	990
Ser	Leu	Arg	Asn	Tyr	Leu	Phe	Ser	Asp	Gln	Lys	Leu	Thr	Ile	Arg	Val	995	1000	1005
Asn	Tyr	Gly	His	Arg	Ile	Val	Thr	Asp	Tyr	Pro	Gly	Arg	Leu	Pro	Arg	1010	1015	1020
Lys	Leu	Pro	Ser	Leu	Asp	Asp	Val	Pro	Gln	Arg	Trp	Phe	Asp	Thr	Ala	1025	1030	1035
Val	Glu	Ala	Asp	Met	Ala	Ser	Thr	Tyr	Glu	Ile	Glu	Ala	Met	Asp	Val	1045	1050	1055
His	Leu	Leu	Arg	Gly	Gln	Phe	Ser	Arg	Tyr	Gln	Ser	Phe	Ser	Lys	Val	1060	1065	1070
Leu	Glu	Ala	Tyr	Leu	Ser	Val	Asp	Trp	Glu	Leu	Thr	Asp	Leu	Asn	Ile	1075	1080	1085

Pro Ala Gly Leu Ser Leu Asp Val Pro Leu Val Ala Gly Cys Asp Pro
 1090 1095 1100
 Thr Asn Gly Glu Pro Tyr Tyr Lys Met Met Gly Leu Gly Pro Met Met
 1105 1110 1115 1120
 Glu Ser Ile Gln Thr Tyr Phe His Gly Thr Val Phe Met Ser Arg Ala
 1125 1130 1135
 Val Ser Gly Leu Asp Val Glu Ser Ile Asp Val Ala Leu Leu Lys Met
 1140 1145 1150
 Lys Ala Leu Lys Val Pro Thr Glu Val Ile Thr Gly Phe Leu Met Thr
 1155 1160 1165
 Cys Gly Leu Ser Lys Pro Lys Ala Ser Thr Val Ala Thr Lys Ile Asn
 1170 1175 1180
 Phe Gln Asp Met Lys Thr Val Gln Val Ala Lys Leu Thr Gly Leu Asn
 1185 1190 1195 1200
 Val Ser Asp Lys Trp Met Ser Met Asn Phe Asp Arg Leu Leu His Ser
 1205 1210 1215
 Tyr Val Asp Val Lys Thr Tyr Val Ser Asp Ser Ser Asn Gln Ile Arg
 1220 1225 1230
 Leu Pro Gly Gly Ala Gly Trp Leu Arg Gly Val Ile Arg Phe Leu Gly
 1235 1240 1245
 Ala Gly Val Val Met Thr Arg Val Gly Pro Pro Gln Pro Val Arg Ile
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 Ser Val Ile Tyr Gly Gly Gly Ala Arg Leu His Ser Lys Phe Leu Asn
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 Trp Met Val Ser Asp Phe
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 Trp Thr Asn Ala Ser Lys Thr Phe Arg Thr Thr Gln Arg His Glu Val
 35 40 45
 Tyr Asp Ile Ile Asn Lys Ile Glu Phe Ile Asp Ser Phe Leu Val Pro
 50 55 60
 Ser Ser Leu Phe Gln Pro Pro Pro His Lys Arg Tyr Trp Asp Val Asp
 65 70 75 80
 Val Arg Gln Arg Val Val Arg Val Pro Lys Cys Ala Val Pro Asp Asp
 85 90 95
 Val Tyr Leu Pro His Ala Asn Leu Thr Asp Val Leu Glu Ile Asn Thr

100	105	110
Glu Ser Ile His Lys Tyr Gly Gln Leu Arg Lys Glu Ile Gln Ala Ala		
115	120	125
Ala Lys Arg Leu Asp Pro Thr Ala Arg Ile Ala Glu Thr Phe Tyr Asn		
130	135	140
Leu Ser Val Tyr Gln Ala Asn Gln Ile Lys Phe Pro Leu Glu Arg Phe		
145	150	155
Leu Leu Cys Leu Val Val Ser Tyr Ala His Glu Leu Ser Pro Ser Pro		
165	170	175
Leu Leu Val Asp Glu Gln Asn Ala Asn Phe Leu Thr Ile Glu Ala Asn		
180	185	190
Pro Ala Leu Ser Ala Leu Lys Ser Ile Met Leu His Phe Met Glu Tyr		
195	200	205
Gly Lys Tyr Lys Pro Pro Phe Leu Lys Thr Ser Arg Asp Ile Val Phe		
210	215	220
Ala Leu Tyr Asp Asp Lys Arg Pro Leu Ser Ser Gln Ile Ala Pro Leu		
225	230	235
Met Ile Asp Leu Val Asn Tyr Ala Ile Val Ile Tyr Ser Cys Asn Ile		
245	250	255
Ser Arg Leu Ile Ser Val Pro Thr Val Arg Met Met Leu Lys Ala Ala		
260	265	270
Gly Thr Thr Ser Tyr Asn His Thr Gln Leu Lys Leu Lys Lys Ile Ile		
275	280	285
Pro Ala Ala Ser Leu Leu Ser Val Tyr His Gly Glu Thr Val Gly Arg		
290	295	300
Val Pro Ile Val Val Trp Glu Glu Pro Arg Glu Glu Tyr Arg Phe Arg		
305	310	315
Leu Asp Gly Ala Arg Asp Leu Pro Arg Gly Trp Lys Asn Glu Leu Gln		
325	330	335
Gly Ala Lys Lys Ala Ile Gly Asp Ala Ser Glu Leu Ala Ser Ser Tyr		
340	345	350
Gly Met Thr Ala Glu Phe Glu Glu Leu Arg Ser Gln Tyr Ser Lys Ile		
355	360	365
Ser Val His Asp Gly Val Gly Met Lys Met Ile Arg Asp Ala Leu Ala		
370	375	380
Gly Val Ser Ser Val Phe Ile Thr Arg Thr Pro Thr Asp Thr Val Leu		
385	390	395
Gln Glu Tyr Val His Ala Pro Val Ile Glu Arg Pro Ile Pro Pro Gln		
405	410	415
Asp Trp Thr Asp Pro Val Gly Val Val Lys Tyr Leu Lys Asn Asp Thr		
420	425	430
Gln His Tyr Val Ala Arg Asn Leu Tyr Ala Thr Trp Arg Glu Ala Ala		
435	440	445
Val Gln Val Ala Asn Asn Pro Asp Asn Trp Asp Pro Asn Thr Gln Ala		
450	455	460
Ile Leu Arg Ser Gln Tyr Val Thr Pro Arg Gly Gly Ser Gly Ser Ser		
465	470	475
Val Lys Lys Val Leu Thr Asp Lys Gly Ile Ile Leu Lys Asn Phe Ser		
485	490	495
Lys Ser Gly Ala Lys Ser Ser Thr Lys Ile Val Gln Ala Ala Gln Leu		

500	505	510
Ala Ser Ile Pro Phe Thr Gln Tyr Gln Asp Thr Ile Met Ala Pro Val		
515	520	525
Ser His Gly Val Arg Ile Gln Val Gln Arg Arg Ser Arg Thr Ile Met		
530	535	540
Pro Phe Ser Val Pro Gln Gln Gln Val Ser Ala Pro His Thr Leu Cys		
545	550	555
Gly Asn Tyr Ile Asn Lys Phe Leu Asn Lys Ser Thr Thr Ser Gly Ser		
565	570	575
Asn Val Thr Glu Lys Val Ile Pro Leu Gly Ile Phe Ala Ser Ser Pro		
580	585	590
Pro Thr Arg Ala Val Asn Ile Asp Ile Lys Ala Cys Asp Ser Ser Ile		
595	600	605
Thr Trp Gly Phe Phe Leu Ser Val Ile Cys Gly Ala Met His Glu Gly		
610	615	620
Met Asp Gly Ile Asn Val Gly Thr Pro Phe Leu Gly Val Pro Ala Thr		
625	630	635
Leu Val Glu Asp Gly Leu Asp Leu Gly Ile Val Gly Thr Arg Ser Ile		
645	650	655
Ser Gly Met Gln Asn Met Val Gln Lys Leu Ser Gln Leu Tyr Glu Arg		
660	665	670
Gly Phe Glu Tyr Glu Val Lys Asp Ala Phe Ser Pro Gly Asn Ala Phe		
675	680	685
Thr His His Thr Thr Thr Phe Pro Ser Gly Ser Thr Ala Thr Ser Thr		
690	695	700
Glu His Thr Ala Asn Asn Ser Thr Met Met Lys Thr Phe Leu Met His		
705	710	715
Trp Leu Pro Asn His Thr Lys Asp Leu Glu Leu Ile Asp Phe Val Lys		
725	730	735
Lys Leu Asp Val Asn Arg Asn Tyr Val Cys Gln Gly Asp Asp Gly Ile		
740	745	750
Met Ile Leu Pro Thr Ser Asp Gly Arg Pro Ile Ser Ser His His Val		
755	760	765
Glu Ser Met Leu Glu Leu Leu Ser Val Phe Gly Lys Glu Ser Gly Trp		
770	775	780
Val Phe Asp Ile Glu Phe Asn Gly Ser Ala Glu Tyr Leu Lys Leu Leu		
785	790	795
Phe Leu Asn Gly Cys Arg Ile Pro Asn Val Gly Arg His Pro Val Val		
805	810	815
Gly Lys Glu Arg Ala Ser Arg Asp Gln Asp Val Ile Trp Pro Gly Gly		
820	825	830
Ile Asp Ala Phe Ile Gly Met Tyr Asn Asn Gly Val Glu Asp Gln Phe		
835	840	845
His Trp Arg Arg Trp Leu Lys Phe Ser Trp Ser Met Ala Cys Phe Leu		
850	855	860
Ser Ser Lys Ala Val Phe Ile Lys Gly Lys Ser Asp Val Ile Gln Tyr		
865	870	875
Pro Ser Trp Ser Phe Val Tyr Leu Gly Leu Pro Pro Ile Arg Ile Phe		
885	890	895
Asp Ser Pro Pro Trp Ile Phe Ser Pro Tyr Thr Pro Gly Gly Asp Leu		

900	905	910
Gly Met Tyr Ser Ile Met Val Thr Gly Lys Lys Tyr Ile Val Asp Arg		
915	920	925
Met Gln Ser Ser Gly Tyr Gln Lys Ala Asn Thr Asp Leu Ser Asn Glu		
930	935	940
Ser Thr Phe Phe Arg Gly Tyr Asp Tyr Val Lys Phe Met Asn Asp Cys		
945	950	955
Gly Ile Leu Pro Gly Tyr Tyr Met Ser Gln Ile Pro Arg Ser Pro Asp		
965	970	975
Lys Thr Lys Arg Lys Val Ile Gly Pro Glu Ser Arg Asp Leu Ile Asp		
980	985	990
Ser Leu Arg Ser Tyr Leu Phe Ser Asp Gln Lys Leu Thr Ile Arg Val		
995	1000	1005
Asn Tyr Gly His Arg Ile Val Thr Asp Tyr Pro Gly Arg Leu Pro Arg		
1010	1015	1020
Lys Leu Pro Ser Leu Asp Asp Val Pro Gln Arg Trp Phe Asp Thr Ala		
1025	1030	1035
Val Glu Ala Asp Met Ala Ser Thr Tyr Glu Ile Glu Ala Met Asp Val		
1045	1050	1055
His Leu Leu Arg Gly Gln Phe Ser Arg Tyr Gln Ser Phe Ser Lys Val		
1060	1065	1070
Leu Glu Ala Tyr Leu Ser Val Asp Trp Glu Leu Thr Asp Leu Asn Ile		
1075	1080	1085
Pro Ala Gly Leu Ser Leu Asp Val Pro Leu Val Ala Gly Cys Asp Pro		
1090	1095	1100
Thr Asn Gly Glu Pro Tyr Tyr Lys Met Met Gly Leu Gly Pro Met Met		
1105	1110	1115
Glu Ser Ile Gln Thr Tyr Phe His Gly Thr Val Phe Met Ser Arg Ala		
1125	1130	1135
Val Ser Gly Leu Asp Val Glu Ser Ile Asp Val Ala Leu Leu Lys Met		
1140	1145	1150
Lys Ala Leu Lys Val Pro Thr Glu Val Ile Thr Gly Phe Leu Met Thr		
1155	1160	1165
Cys Gly Leu Ser Lys Pro Lys Ala Ser Thr Val Ala Thr Lys Ile Asn		
1170	1175	1180
Phe Gln Asp Met Lys Thr Val Gln Val Ala Lys Leu Thr Gly Leu Asn		
1185	1190	1195
Val Ser Asp Lys Trp Met Ser Met Asn Phe Asp Arg Leu Leu His Ser		
1205	1210	1215
Tyr Val Asp Val Lys Thr Tyr Val Ser Asp Ser Ser Asn Gln Ile Arg		
1220	1225	1230
Leu Pro Gly Gly Ala Gly Trp Leu Arg Gly Val Ile Arg Phe Leu Gly		
1235	1240	1245
Ala Gly Val Val Met Thr Arg Val Gly Pro Pro Gln Pro Val Arg Ile		
1250	1255	1260
Ser Ile Ile Tyr Gly Gly Gly Ala Arg Leu His Ser Lys Phe Leu Asn		
1265	1270	1275
Trp Met Val Ser Asp Phe		
1285		

<210> 36
 <211> 1296
 <212> PRT
 <213> Viruses

<220>
 <223> L2 CAN BC

<400> 36
 Asp Asn Cys Asn Asp Glu Met Ala Thr Leu Tyr Gly Leu Arg Ile Thr
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 Arg Leu Lys Asn Leu Pro Leu Leu Glu Arg Asp Thr Glu Glu Tyr Thr
 20 25 30
 Tyr Lys Glu Ile Ile Thr Phe Leu Thr Thr Asp Val Val Lys Arg Leu
 35 40 45
 Arg Gln Phe Gln Asn Gly Asp Arg Glu Cys Tyr Ala Val Gln Leu Leu
 50 55 60
 Phe Pro Leu Thr Gly Trp Cys Pro Ser Val Asp Val Val Asp Gly Thr
 65 70 75 80
 Ser Tyr Asn Thr Leu Gly Lys Leu Ile Asn Leu Ile Gln Thr Ser Cys
 85 90 95
 Gly Leu Leu Ala Arg Gln Leu Asn Val Arg Tyr Pro Leu Val Gly Ala
 100 105 110
 Ala Asn Ala Ile Val Asn Ser Leu Val Ile Thr Gln Leu Val Asp Cys
 115 120 125
 Ala Ile Arg His Glu Ser Thr Ala Ala Leu Ile Glu His Leu Phe Asp
 130 135 140
 Asp Asn Gly Gln Ile Ser Ser Leu Thr Val His Ala Thr Thr Trp Asp
 145 150 155 160
 Glu Val Lys Leu Ser Lys Asn Met Thr Val Arg Arg Arg Val Val Glu
 165 170 175
 Cys Val Ala Gly Leu Lys Tyr Trp Leu Phe Arg Asn Val Lys Gly Ala
 180 185 190
 Lys Ser Phe Glu Thr Trp Gly Lys Asp Tyr Pro Gly Tyr Ala Asn Val
 195 200 205
 His Phe Phe Asp Asp Ser Ala Gly Lys Gln Ala Ala Ile Arg His Ile
 210 215 220
 Gly Asn Asp Val His Ile Phe Gln His Phe Asp Asn Pro Thr Tyr Ala
 225 230 235 240
 Pro His Leu Tyr Val Pro Leu Glu Gly Asn Tyr Ser Arg Asp Met Tyr
 245 250 255
 Thr Asp Ser Phe Ser Thr Leu Val Gln Met Glu Cys Val Val Asp Gln
 260 265 270
 Ala Arg Ala Asn Ser Asn Ser Gly Leu Lys Met Val Ser Arg Arg Phe
 275 280 285
 Ile Glu Val Met Lys Cys Ile Gln Arg Pro Met Gly Glu Thr Gly Val
 290 295 300
 Ser Ile Leu Ser Lys Leu Asp Glu Ile Gly Thr Val Leu Ala Asn Gly
 305 310 315 320

Gly	Gln	Phe	Glu	Leu	Ala	Thr	Leu	Asp	Leu	Ser	Arg	Arg	Glu	Val	Ile	
				325					330					335		
His	Ser	Met	Ile	Asp	Thr	Ile	Ser	Asp	Thr	Pro	Asn	Ser	Ser	Arg	Ala	
				340					345					350		
Ile	Pro	Phe	Asp	Ala	Thr	Arg	Leu	Val	Ile	Phe	Leu	Asp	Thr	Ala	Tyr	
				355					360					365		
Thr	Gly	Pro	Met	Pro	Ser	Thr	Asp	Phe	Asn	Val	Ser	Thr	Tyr	Glu	Phe	
				370					375					380		
Gly	Phe	Ser	Leu	Ile	Gly	Ser	Val	Ser	Gly	Lys	Ala	Phe	Ser	Arg	Pro	
385											395				400	
Ile	Arg	Tyr	Ser	Pro	Asn	Tyr	Lys	Asp	Asp	Leu	Gly	Asp	Leu	His	Asp	
				405						410				415		
Val	Arg	Glu	Leu	Leu	Arg	Thr	Phe	Val	Lys	Arg	Lys	Asp	Asp	Val	Thr	
				420						425				430		
Ile	Ser	Asn	Ile	Trp	Asp	Gly	Leu	Pro	Leu	Val	Asp	Phe	Ala	Lys	Phe	
				435						440				445		
Gly	Asn	Ala	Ala	Ala	Thr	Pro	Val	Asp	Pro	Arg	Leu	Arg	Lys	Glu	Phe	
											455			460		
Pro	Asn	Asp	Tyr	Phe	Asp	Arg	Glu	Gln	Ser	Ile	Asn	Arg	Met	Leu	Phe	
465						470					475				480	
Arg	Gly	Tyr	Arg	Lys	Thr	Ile	Asp	Arg	Ser	Trp	Ala	Lys	Asp	Gln	Ala	
				485						490				495		
Val	Leu	Glu	Thr	Ile	Phe	Ser	Ile	Ala	Gly	Asn	Trp	Leu	Thr	Ala	Asn	
				500						505				510		
Lys	Ser	Tyr	Thr	Ala	Ala	Tyr	Phe	Gly	Ala	Ser	Gly	Ile	His	Pro	Asn	
				515						520				525		
Asp	Asp	Gln	Pro	Leu	Val	Ile	Asp	Pro	Trp	Ser	Lys	Gly	Thr	Ile	Phe	
				530						535				540		
Gly	Val	Pro	Ala	Pro	Ser	Ser	Lys	Val	Ser	Gln	Tyr	Gly	Tyr	Asp	Val	
545										555					560	
Ser	Asn	Gly	Val	Ile	Thr	Asp	Leu	Thr	Arg	Pro	Ser	Pro	Ser	Gly	Thr	
				565						570				575		
Phe	Ser	Phe	Ile	Tyr	Cys	Asp	Val	Asp	Gln	Val	Gln	Asp	Ala	Gly	Asp	
				580						585				590		
Asp	Leu	Gly	Val	Cys	Tyr	Gln	Ile	Val	Arg	Ser	Leu	Phe	Asp	Thr	Ile	
				595						600				605		
Asn	Asp	Ala	Leu	Thr	Thr	Gly	Gly	Ser	Phe	Val	Met	Lys	Ile	Asn	Phe	
				610						615				620		
Pro	Thr	Arg	Gln	Ile	Met	Asp	Tyr	Leu	Val	Glu	Val	Val	Ala	Pro	Lys	
625						630					635				640	
Phe	Thr	Asp	Gly	Val	Leu	Ile	Lys	Pro	Val	Val	Ser	Asn	Asn	Leu	Glu	
				645						650				655		
Leu	Phe	Val	Gly	Phe	Phe	Cys	Lys	Val	Asp	Asn	Arg	Gly	Cys	His	Trp	
				660						665				670		
Asn	Ser	Asp	Cys	Ser	Arg	Phe	Met	Phe	Arg	Leu	His	Asn	Arg	Tyr	Asn	
				675						680				685		
His	Leu	Asp	His	Ala	Cys	Asp	Tyr	Ile	Pro	Ile	Ile	Gly	Asn	Ala	Arg	
				690						695				700		
Glu	His	Pro	Arg	Ala	Ile	Ser	Arg	Gln	Glu	Phe	Ala	Ile	Arg	Asn	Pro	
705						710					715				720	

Thr	Ser	Ser	Ser	Asp	Thr	Leu	Ser	Gln	Glu	Ile	Glu	Leu	Ser	Leu	Gly			
				725					730					735				
Leu	Phe	Ser	Gln	Gln	Cys	Ala	Ala	Asn	Thr	Ile	Thr	Ile	Ser	Arg	Asn			
			740					745					750					
Leu	Leu	His	Gly	Met	Thr	Glu	Ile	Leu	Val	Ser	Gly	Val	Val	Thr	Ala			
		755					760				765							
Ser	Ser	Leu	Asn	Arg	Cys	Glu	Arg	Leu	Asp	Tyr	Ser	Pro	Thr	Ile	Asp			
	770					775				780								
Ser	Thr	Thr	Ile	Leu	His	Gln	His	Arg	Glu	Ile	Ala	Thr	Ala	Ser	Pro			
785					790				795					800				
Gln	Leu	Phe	Gln	Phe	Glu	Ala	Ser	Glu	Trp	Thr	Leu	Leu	Ala	Met	Gly			
			805					810					815					
Tyr	Asn	Glu	Leu	Ala	Ala	Arg	Phe	Val	Asn	Gly	Ser	Ala	Lys	Ser	Leu			
		820						825				830						
Val	Asp	Val	Gly	Ser	Gly	Pro	Glu	Gly	Arg	Ser	Ile	Asn	Tyr	Val	Asp			
	835					840					845							
Ser	Asp	Ile	Lys	Val	Thr	Leu	Phe	Asp	Gln	Arg	Thr	Pro	His	Ile	Asn			
	850					855					860							
Val	Asp	Trp	Phe	Ala	Asn	Val	Glu	Tyr	Ile	Gln	Gly	Asp	Tyr	Leu	Gln			
865					870					875				880				
Arg	Arg	Asp	Trp	Arg	Gly	Cys	Thr	Phe	Asp	Thr	Ala	Ile	Cys	Ile	Phe			
			885					890					895					
Ser	Phe	Gly	Ala	Ala	Thr	Ala	Gly	Ser	Pro	Thr	Gly	Met	Ile	Glu	Tyr			
		900					905					910						
Leu	Thr	Glu	Leu	Leu	Glu	Ile	Leu	Lys	Asp	Ala	Gly	Cys	Thr	Arg	Ile			
	915						920					925						
Ile	Ile	Gln	Leu	Asn	Cys	Pro	Leu	Met	Thr	Lys	Pro	Thr	Gly	Val	Val			
	930					935						940						
Ser	Lys	Leu	Glu	Ile	Asp	Val	Ile	Asn	Asp	Asp	Tyr	Tyr	Phe	Ile	Lys			
945					950					955				960				
Gln	Gly	Arg	Val	Glu	Pro	Tyr	Ala	Ser	Pro	Gln	Asp	Ile	Leu	Gly	Ala			
			965					970					975					
Ile	Thr	Gln	Ala	Leu	Pro	Gln	Ser	Thr	Val	Gln	Ile	Lys	Thr	Leu	Asp			
		980						985					990					
Asp	Glu	Leu	Ser	Trp	Phe	Pro	Arg	Ile	Ile	Ser	Glu	Gly	Phe	Arg	Val			
	995					1000						1005						
Thr	Thr	Glu	Ala	Met	Arg	Asp	Ala	Ile	Thr	Leu	Ser	Lys	Leu	Leu	Pro			
	1010					1015						1020						
Leu	Phe	Leu	Ile	Glu	Thr	Ser	Lys	Thr	Leu	Phe	Arg	Pro	Ala	Lys	Tyr			
1025					1030					1035				1040				
Ile	Gly	Leu	Val	Asp	Glu	Val	Ile	Thr	Ala	Thr	Trp	Thr	Val	Thr	Asp			
			1045					1050					1055					
Pro	Phe	Val	Asp	Val	Ser	Val	Tyr	Leu	Glu	Asp	Thr	Ser	Val	Gly	Phe			
		1060						1065					1070					
Phe	Asn	Thr	Ile	Asp	Asn	Glu	Ile	Val	Gly	Val	Glu	Val	Lys	Ala	Val			
	1075					1080						1085						
Phe	Asp	Gly	Arg	Gly	Thr	Tyr	Arg	Gly	Thr	Phe	Ser	Thr	Asp	Lys	Ala			
	1090					1095					1100							
Gly	Val	Val	Thr	Phe	Glu	Gln	Thr	Glu	Lys	Asp	Gly	Thr	Ser	Thr	Ile			
1105					1110					1115				1120				

Leu Gly Ser Phe Leu Cys Val Thr Gly Pro Asn Ala Val Thr Ile Thr
 1125 1130 1135
 Trp Pro Ala Asn Glu Val Val Gly Asp Asn Pro Asn Val Ala Ser Leu
 1140 1145 1150
 Thr Asn Asn Thr Gly Tyr Glu Leu Ile Val Ala Tyr Glu Tyr Asp Gly
 1155 1160 1165
 Thr Trp Ile Gly Val Asn Ala Tyr Lys Ala Asn Val Tyr Glu Asp Ala
 1170 1175 1180
 Ala Gly Asp Asp Lys Met Glu Tyr Tyr His Val Val Gly Glu Glu Lys
 1185 1190 1195 1200
 Leu Ala Trp Ala Leu Val Asp His His Tyr Gly Ser Pro Gly Ala Arg
 1205 1210 1215
 Val Val Ile Pro Phe Val Trp Pro Asp Val Thr Ala Leu Pro Gly Asp
 1220 1225 1230
 Val Leu Val Ala Pro Pro Tyr Ala Gly Asp Trp Leu Val Asn Val Asp
 1235 1240 1245
 Gly Asn Leu Thr Ala Glu Leu His Val Asp Glu Pro Asp Glu Ile Pro
 1250 1255 1260
 Ala Leu Trp Thr Leu Met Thr Arg Ser Val Ala Asn Asn Gly Ser Ser
 1265 1270 1275 1280
 Leu Ser Tyr Ile Ser Gln Ala Gly Ile Tyr Thr Phe Leu Lys Leu Pro
 1285 1290 1295

<210> 37

<211> 1296

<212> PRT

<213> Viruses

<220>

<223> L2 NOR1988, NOR2018NL, NOR2018SF

<400> 37

Asp Asn Cys Asn Asp Glu Met Ala Thr Leu Tyr Gly Leu Arg Ile Thr
 1 5 10 15
 Arg Leu Lys Asn Leu Pro Leu Leu Glu Arg Asp Thr Glu Glu Tyr Thr
 20 25 30
 Tyr Lys Glu Ile Ile Thr Phe Leu Thr Thr Asp Val Val Lys Arg Leu
 35 40 45
 Arg Gln Phe Gln Asn Gly Asp Arg Glu Cys Tyr Ala Val Gln Leu Leu
 50 55 60
 Phe Pro Leu Thr Gly Trp Cys Pro Ser Val Asp Val Val Asp Gly Thr
 65 70 75 80
 Ser Tyr Asn Thr Leu Gly Lys Leu Ile Asn Leu Ile Gln Thr Ser Cys
 85 90 95
 Gly Leu Leu Ala Arg Gln Leu Asn Val Arg Tyr Pro Leu Val Gly Ala
 100 105 110
 Ala Asn Ala Ile Val Asn Ser Leu Val Ile Thr Gln Leu Val Asp Cys

115	120	125
Ala Ile Arg His Glu Ser Thr	Ala Ala Leu Ile Glu His Leu Phe Asp	
130	135	140
Asp Asn Gly Gln Ile Ser Ser Leu Thr Val His Ala Thr Thr Trp Asp		
145	150	155
Glu Val Lys Leu Ser Lys Asn Met Thr Val Arg Arg Arg Val Val Glu		
165	170	175
Cys Val Ala Gly Leu Lys Tyr Trp Leu Phe Arg Asn Val Lys Gly Ala		
180	185	190
Lys Ser Phe Glu Thr Trp Gly Lys Asp Tyr Pro Gly Tyr Ala Asn Val		
195	200	205
His Phe Phe Asp Asp Ser Ala Gly Lys Gln Ala Ala Ile Arg His Ile		
210	215	220
Gly Asn Asp Val His Ile Phe Gln His Phe Asp Asn Pro Thr Tyr Ala		
225	230	235
Pro His Leu Tyr Val Pro Leu Glu Gly Asn Tyr Ser Arg Asp Met Tyr		
245	250	255
Thr Asp Ser Phe Ser Thr Leu Val Gln Met Glu Cys Val Val Asp Gln		
260	265	270
Ala Arg Ala Asn Ser Asn Ser Gly Leu Lys Met Val Ser Arg Arg Phe		
275	280	285
Ile Glu Val Met Lys Cys Ile Gln Arg Pro Met Gly Glu Thr Gly Val		
290	295	300
Ser Ile Leu Ser Lys Leu Asp Glu Ile Gly Thr Val Leu Ala Asn Gly		
305	310	315
Gly Gln Phe Glu Leu Ala Thr Leu Asp Leu Ser Arg Arg Glu Val Ile		
325	330	335
His Ser Met Ile Asp Thr Ile Ser Asp Thr Pro Asn Ser Ser Arg Ala		
340	345	350
Ile Pro Phe Asp Ala Thr Arg Leu Val Ile Phe Leu Asp Thr Ala Tyr		
355	360	365
Thr Gly Pro Met Pro Ser Thr Asp Phe Asn Val Ser Thr Tyr Glu Phe		
370	375	380
Gly Phe Ser Leu Ile Gly Ser Val Ser Gly Lys Ala Phe Ser Arg Pro		
385	390	395
Ile Arg Tyr Ser Pro Asn Tyr Lys Asp Asp Leu Gly Asp Leu His Asp		
405	410	415
Val Arg Glu Leu Leu Arg Thr Phe Val Lys Arg Lys Asp Asp Val Thr		
420	425	430
Ile Ser Asn Ile Trp Asp Gly Leu Pro Leu Val Asp Phe Ala Lys Phe		
435	440	445
Gly Asn Ala Ala Ala Thr Pro Val Asp Pro Arg Leu Arg Lys Glu Phe		
450	455	460
Pro Asn Asp Tyr Phe Asp Arg Glu Gln Ser Ile Asn Arg Met Leu Phe		
465	470	475
Arg Gly Tyr Arg Lys Thr Ile Asp Arg Ser Trp Ala Lys Asp Gln Ala		
485	490	495
Val Leu Glu Thr Ile Phe Ser Ile Ala Gly Asn Trp Leu Thr Ala Asn		
500	505	510
Lys Ser Tyr Thr Ala Ala Tyr Phe Gly Ala Ser Gly Ile His Pro Asn		

515	520	525
Asp Asp Gln Pro Leu Val Ile	Asp Pro Trp Ser Lys Gly Thr Ile Phe	
530	535	540
Gly Val Pro Ala Pro Ser Ser Lys Val Ser Gln Tyr Gly Tyr Asp Val		
545	550	555
Ser Asn Gly Val Ile Thr Asp Leu Thr Arg Pro Ser Pro Ser Gly Thr		
565	570	575
Phe Ser Phe Ile Tyr Cys Asp Val Asp Gln Val Gln Asp Ala Gly Asp		
580	585	590
Asp Leu Gly Val Cys Tyr Gln Ile Val Arg Ser Leu Phe Asp Thr Ile		
595	600	605
Asn Asp Ala Leu Thr Thr Gly Gly Ser Phe Val Met Lys Ile Asn Phe		
610	615	620
Pro Thr Arg Gln Ile Met Asp Tyr Leu Val Glu Val Val Ala Pro Lys		
625	630	635
Phe Thr Asp Gly Val Leu Ile Lys Pro Val Val Ser Asn Asn Leu Glu		
645	650	655
Leu Phe Val Gly Phe Phe Cys Lys Val Asp Asn Arg Gly Cys His Trp		
660	665	670
Asn Ser Asp Cys Ser Arg Phe Met Phe Arg Leu His Asn Arg Tyr Asn		
675	680	685
His Leu Asp His Ala Cys Asp Tyr Ile Pro Ile Ile Gly Asn Ala Arg		
690	695	700
Glu His Pro Arg Ala Ile Ser Arg Gln Glu Phe Ala Ile Arg Asn Pro		
705	710	715
Thr Ser Ser Ser Asp Thr Leu Ser Gln Glu Ile Glu Leu Ser Leu Gly		
725	730	735
Leu Phe Ser Gln Gln Cys Ala Ala Asn Thr Ile Thr Ile Ser Arg Asn		
740	745	750
Leu Leu His Gly Met Thr Glu Ile Leu Val Ser Gly Val Val Thr Ala		
755	760	765
Ser Ser Leu Asn Arg Cys Glu Arg Leu Asp Tyr Ser Pro Thr Ile Asp		
770	775	780
Ser Thr Thr Ile Leu His Gln His Arg Glu Ile Ala Thr Ala Ser Pro		
785	790	795
Gln Leu Phe Gln Phe Glu Ala Ser Glu Trp Thr Leu Leu Ala Met Gly		
805	810	815
Tyr Asn Glu Leu Ala Ala Arg Phe Val Asn Gly Ser Ala Lys Ser Leu		
820	825	830
Val Asp Val Gly Ser Gly Pro Glu Gly Arg Ser Ile Asn Tyr Val Asp		
835	840	845
Ser Asp Ile Lys Val Thr Leu Phe Asp Gln Arg Thr Pro His Ile Asn		
850	855	860
Val Asp Trp Phe Ala Asn Val Glu Tyr Ile Gln Gly Asp Tyr Leu Gln		
865	870	875
Arg Arg Asp Trp Arg Gly Cys Thr Phe Asp Thr Ala Ile Cys Ile Phe		
885	890	895
Ser Phe Gly Ala Ala Thr Ala Gly Ser Pro Thr Gly Met Ile Glu Tyr		
900	905	910
Leu Thr Glu Leu Leu Glu Ile Leu Lys Asp Ala Gly Cys Thr Arg Ile		

915	920	925
Ile Ile Gln Leu Asn Cys Pro Leu Met Thr Lys Pro Thr Gly Val Val		
930	935	940
Ser Lys Leu Glu Ile Asp Val Ile Asn Asp Asp Tyr Tyr Phe Ile Lys		
945	950	955
Gln Gly Arg Val Glu Pro Tyr Ala Ser Pro Gln Asp Ile Leu Gly Ala		
965	970	975
Ile Thr Gln Ala Leu Pro Gln Ser Thr Val Gln Ile Lys Thr Leu Asp		
980	985	990
Asp Glu Leu Ser Trp Phe Pro Arg Ile Ile Ser Glu Gly Phe Arg Val		
995	1000	1005
Thr Thr Glu Ala Met Arg Asp Ala Ile Thr Leu Ser Lys Leu Leu Pro		
1010	1015	1020
Leu Phe Leu Ile Glu Thr Ser Lys Thr Leu Phe Arg Pro Ala Lys Tyr		
1025	1030	1035
Ile Gly Leu Val Asp Glu Val Ile Thr Ala Thr Trp Thr Val Thr Asp		
1045	1050	1055
Pro Phe Val Asp Val Ser Val Tyr Leu Glu Asp Thr Ser Val Gly Phe		
1060	1065	1070
Phe Asn Thr Ile Asp Asn Glu Ile Ile Gly Val Glu Val Lys Ala Val		
1075	1080	1085
Phe Asp Gly Arg Gly Thr Tyr Arg Gly Thr Phe Ser Thr Asp Lys Ala		
1090	1095	1100
Gly Val Val Thr Phe Glu Gln Thr Glu Lys Asp Gly Thr Ser Thr Ile		
1105	1110	1115
Leu Gly Ser Phe Leu Cys Val Thr Gly Pro Asn Ala Val Ala Ile Thr		
1125	1130	1135
Trp Pro Ala Asn Glu Val Val Gly Asp Asn Pro Asn Val Ala Ser Leu		
1140	1145	1150
Thr Asn Asn Thr Gly Tyr Glu Leu Ile Val Ala Tyr Glu Tyr Asp Gly		
1155	1160	1165
Thr Trp Ile Gly Val Asn Ala Tyr Lys Ala Asn Val Tyr Glu Asp Ala		
1170	1175	1180
Ala Gly Asp Asp Lys Met Glu Tyr Tyr His Val Val Gly Glu Glu Lys		
1185	1190	1195
Leu Ala Trp Ala Leu Val Asp His His Tyr Gly Ser Pro Gly Ala Arg		
1205	1210	1215
Val Val Ile Pro Phe Val Trp Pro Asp Val Thr Ala Leu Pro Gly Asp		
1220	1225	1230
Val Leu Val Ala Pro Pro Tyr Ala Gly Asp Trp Leu Val Asn Val Asp		
1235	1240	1245
Gly Asn Leu Thr Ala Glu Leu His Val Asp Glu Pro Asp Glu Ile Pro		
1250	1255	1260
Ala Leu Trp Thr Leu Met Thr Arg Ser Val Ala Asn Asn Gly Ser Ser		
1265	1270	1275
Leu Ser Tyr Ile Gly Gln Ala Gly Ile Tyr Thr Phe Leu Lys Leu Pro		
1285	1290	1295

<210> 38
 <211> 1296
 <212> PRT
 <213> Viruses

<220>
 <223> L2 NOR1996

<400> 38
 Asp Asn Cys Asn Asp Glu Met Ala Thr Leu Tyr Gly Leu Arg Ile Thr
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 Arg Leu Lys Asn Leu Pro Leu Leu Glu Arg Asp Thr Glu Glu Tyr Thr
 20 25 30
 Tyr Lys Glu Ile Ile Thr Phe Leu Thr Thr Asp Val Val Lys Arg Leu
 35 40 45
 Arg Gln Phe Gln Asn Gly Asp Arg Glu Cys Tyr Ala Val Gln Leu Leu
 50 55 60
 Phe Pro Leu Thr Gly Trp Cys Pro Ser Val Asp Val Val Asp Gly Thr
 65 70 75 80
 Ser Tyr Asn Thr Leu Gly Lys Leu Ile Asn Leu Ile Gln Thr Ser Cys
 85 90 95
 Gly Leu Leu Ala Arg Gln Leu Asn Val Arg Tyr Pro Leu Val Gly Ala
 100 105 110
 Ala Asn Ala Ile Val Asn Ser Leu Val Ile Thr Gln Leu Val Asp Cys
 115 120 125
 Ala Ile Arg His Glu Ser Thr Ala Ala Leu Ile Glu His Leu Phe Asp
 130 135 140
 Asp Asn Gly Gln Ile Ser Ser Leu Thr Val His Ala Thr Thr Trp Asp
 145 150 155 160
 Glu Val Lys Leu Ser Lys Asn Met Thr Val Arg Arg Arg Val Val Glu
 165 170 175
 Cys Val Ala Gly Leu Lys Tyr Trp Leu Phe Arg Asn Val Lys Gly Ala
 180 185 190
 Lys Ser Phe Glu Thr Trp Gly Lys Asp Tyr Pro Gly Tyr Ala Asn Val
 195 200 205
 His Phe Phe Asp Asp Ser Ala Gly Lys Gln Ala Ala Ile Arg His Ile
 210 215 220
 Gly Asn Asp Val His Ile Phe Gln His Phe Asp Asn Pro Thr Tyr Ala
 225 230 235 240
 Pro His Leu Tyr Val Pro Leu Glu Gly Asn Tyr Ser Arg Asp Met Tyr
 245 250 255
 Thr Asp Ser Phe Ser Thr Leu Val Gln Met Glu Cys Val Val Asp Gln
 260 265 270
 Ala Arg Ala Asn Ser Asn Ser Gly Leu Lys Met Val Ser Arg Arg Phe
 275 280 285
 Ile Glu Val Met Lys Cys Ile Gln Arg Pro Met Gly Glu Thr Gly Val
 290 295 300
 Ser Ile Leu Ser Lys Leu Asp Glu Ile Gly Thr Val Leu Ala Asn Gly
 305 310 315 320

Gly	Gln	Phe	Glu	Leu	Ala	Thr	Leu	Asp	Leu	Ser	Arg	Arg	Glu	Val	Ile	
				325					330					335		
His	Ser	Met	Ile	Asp	Thr	Ile	Ser	Asp	Thr	Pro	Asn	Ser	Ser	Arg	Ala	
				340					345					350		
Ile	Pro	Phe	Asp	Ala	Thr	Arg	Leu	Val	Ile	Phe	Leu	Asp	Thr	Ala	Tyr	
				355					360					365		
Thr	Gly	Pro	Met	Pro	Ser	Thr	Asp	Phe	Asn	Val	Ser	Thr	Tyr	Glu	Phe	
				370					375					380		
Gly	Phe	Ser	Leu	Ile	Gly	Ser	Val	Ser	Gly	Lys	Ala	Phe	Ser	Arg	Pro	
385											395				400	
Ile	Arg	Tyr	Ser	Pro	Asn	Tyr	Lys	Asp	Asp	Leu	Gly	Asp	Leu	His	Asp	
				405						410				415		
Val	Arg	Glu	Leu	Leu	Arg	Thr	Phe	Val	Lys	Arg	Lys	Asp	Asp	Val	Thr	
				420						425				430		
Ile	Ser	Asn	Ile	Trp	Asp	Gly	Leu	Pro	Leu	Val	Asp	Phe	Ala	Lys	Phe	
				435						440				445		
Gly	Asn	Ala	Ala	Ala	Thr	Pro	Val	Asp	Pro	Arg	Leu	Arg	Lys	Glu	Phe	
											455			460		
Pro	Asn	Asp	Tyr	Phe	Asp	Arg	Glu	Gln	Ser	Ile	Asn	Arg	Met	Leu	Phe	
465						470					475				480	
Arg	Gly	Tyr	Arg	Lys	Thr	Ile	Asp	Arg	Ser	Trp	Ala	Lys	Asp	Gln	Ala	
				485						490				495		
Val	Leu	Glu	Thr	Ile	Phe	Ser	Ile	Ala	Gly	Asn	Trp	Leu	Thr	Ala	Asn	
				500						505				510		
Lys	Ser	Tyr	Thr	Ala	Ala	Tyr	Phe	Gly	Ala	Ser	Gly	Ile	His	Pro	Asn	
				515						520				525		
Asp	Asp	Gln	Pro	Leu	Val	Ile	Asp	Pro	Trp	Ser	Lys	Gly	Thr	Ile	Phe	
				530							540					
Gly	Val	Pro	Ala	Pro	Ser	Ser	Lys	Val	Ser	Gln	Tyr	Gly	Tyr	Asp	Val	
545											555				560	
Ser	Asn	Gly	Val	Ile	Thr	Asp	Leu	Thr	Arg	Pro	Ser	Pro	Ser	Gly	Thr	
				565						570				575		
Phe	Ser	Phe	Ile	Tyr	Cys	Asp	Val	Asp	Gln	Val	Gln	Asp	Ala	Gly	Asp	
				580						585				590		
Asp	Leu	Gly	Val	Cys	Tyr	Gln	Ile	Val	Arg	Ser	Leu	Phe	Asp	Thr	Ile	
				595						600				605		
Asn	Asp	Ala	Leu	Thr	Thr	Gly	Gly	Ser	Phe	Val	Met	Lys	Ile	Asn	Phe	
				610							620					
Pro	Thr	Arg	Gln	Ile	Met	Asp	Tyr	Leu	Val	Glu	Val	Val	Ala	Pro	Lys	
625						630					635				640	
Phe	Thr	Asp	Gly	Val	Leu	Ile	Lys	Pro	Val	Val	Ser	Asn	Asn	Leu	Glu	
				645						650				655		
Leu	Phe	Val	Gly	Phe	Phe	Cys	Lys	Val	Asp	Asn	Arg	Gly	Cys	His	Trp	
				660						665				670		
Asn	Ser	Asp	Cys	Ser	Arg	Phe	Met	Phe	Arg	Leu	His	Asn	Arg	Tyr	Asn	
				675						680				685		
His	Leu	Asp	His	Ala	Cys	Asp	Tyr	Ile	Pro	Ile	Ile	Gly	Asn	Ala	Arg	
				690						700						
Glu	His	Pro	Arg	Ala	Ile	Ser	Arg	Gln	Glu	Phe	Ala	Ile	Arg	Asn	Pro	
705						710					715				720	

Leu	Gly	Ser	Phe	Leu	Cys	Val	Thr	Gly	Pro	Asn	Ala	Val	Ala	Ile	Thr
				1125					1130					1135	
Trp	Pro	Ala	Asn	Glu	Val	Val	Gly	Asp	Asn	Pro	Asn	Val	Ala	Ser	Leu
			1140					1145					1150		
Thr	Asn	Asn	Thr	Gly	Tyr	Glu	Leu	Ile	Val	Ala	Tyr	Glu	Tyr	Asp	Gly
		1155					1160					1165			
Thr	Trp	Ile	Gly	Val	Asn	Ala	Tyr	Lys	Ala	Asn	Val	Tyr	Glu	Asp	Ala
	1170					1175					1180				
Ala	Gly	Asp	Asp	Lys	Met	Glu	Tyr	Tyr	His	Val	Val	Gly	Glu	Glu	Lys
1185				1190					1195					1200	
Leu	Ala	Trp	Ala	Leu	Val	Asp	His	His	Tyr	Gly	Ser	Pro	Gly	Ala	Arg
			1205						1210					1215	
Val	Val	Ile	Pro	Phe	Val	Trp	Pro	Asp	Val	Thr	Ala	Leu	Pro	Gly	Asp
		1220						1225					1230		
Val	Leu	Val	Ala	Pro	Pro	Tyr	Ala	Gly	Asp	Trp	Leu	Val	Asn	Val	Asp
	1235					1240					1245				
Gly	Asn	Leu	Thr	Ala	Glu	Leu	His	Val	Asp	Glu	Pro	Asp	Glu	Ile	Pro
	1250					1255				1260					
Ala	Leu	Trp	Thr	Leu	Met	Thr	Arg	Ser	Val	Ala	Asn	Asn	Gly	Ser	Ser
1265				1270					1275					1280	
Leu	Ser	Tyr	Ile	Gly	Gln	Ala	Gly	Ile	Tyr	Thr	Phe	Leu	Lys	Leu	Pro
			1285					1290					1295		

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<211> 1296

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<220>

<223> L2 NOR1997

<400> 39

Asp	Asn	Cys	Asn	Asp	Glu	Met	Ala	Thr	Leu	Tyr	Gly	Leu	Arg	Ile	Thr
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Arg	Leu	Lys	Asn	Leu	Pro	Leu	Leu	Glu	Arg	Asp	Thr	Glu	Glu	Tyr	Thr
		20						25				30			
Tyr	Lys	Glu	Ile	Ile	Thr	Phe	Leu	Thr	Thr	Asp	Val	Val	Lys	Arg	Leu
	35					40					45				
Arg	Gln	Phe	Gln	Asn	Gly	Asp	Arg	Glu	Cys	Tyr	Ala	Val	Gln	Leu	Leu
	50				55				60						
Phe	Pro	Leu	Thr	Gly	Trp	Cys	Pro	Ser	Val	Asp	Val	Val	Asp	Gly	Thr
65				70					75					80	
Ser	Tyr	Asn	Thr	Leu	Gly	Lys	Leu	Ile	Asn	Leu	Ile	Gln	Thr	Ser	Cys
			85					90				95			
Gly	Leu	Leu	Ala	Arg	Gln	Leu	Asn	Val	Arg	Tyr	Pro	Leu	Val	Gly	Ala
		100						105				110			
Ala	Asn	Ser	Ile	Val	Asn	Ser	Leu	Val	Ile	Thr	Gln	Leu	Val	Asp	Cys

115	120	125
Ala Ile Arg His Glu Ser Thr	Ala Ala Leu Ile Glu His Leu Phe Asp	
130	135	140
Asp Asn Gly Gln Ile Ser Ser Leu Thr Val His Ala Thr Thr Trp Asn		
145	150	155
Glu Val Lys Leu Ser Lys Asn Met Thr Val Arg Arg Arg Val Val Glu		
165	170	175
Cys Val Ala Gly Leu Lys Tyr Trp Leu Phe Arg Asn Val Lys Gly Ala		
180	185	190
Lys Ser Phe Glu Thr Trp Gly Lys Asp Tyr Pro Gly Tyr Ala Asn Val		
195	200	205
His Phe Phe Asp Asp Ser Ala Gly Lys Gln Ala Ala Ile Arg His Ile		
210	215	220
Gly Asn Asp Val His Ile Phe Gln His Phe Asp Asn Pro Thr Tyr Ala		
225	230	235
Pro His Leu Tyr Val Pro Leu Glu Gly Asn Tyr Ser Arg Asp Met Tyr		
245	250	255
Thr Asp Ser Phe Ser Thr Leu Val Gln Met Glu Cys Val Val Asp Gln		
260	265	270
Ala Arg Ala Asn Ser Asn Ser Gly Leu Lys Met Val Ser Arg Arg Phe		
275	280	285
Ile Glu Val Met Lys Cys Ile Gln Arg Pro Met Gly Glu Thr Gly Val		
290	295	300
Ser Ile Leu Ser Lys Leu Asp Glu Ile Gly Thr Val Leu Ala Asn Gly		
305	310	315
Gly Gln Phe Glu Leu Ala Thr Leu Asp Leu Ser Arg Arg Glu Val Ile		
325	330	335
His Ser Met Ile Asp Thr Ile Ser Asp Thr Pro Asn Ser Ser Arg Ala		
340	345	350
Ile Pro Phe Asp Ala Thr Arg Leu Val Ile Phe Leu Asp Thr Ala Tyr		
355	360	365
Thr Gly Pro Met Pro Ser Thr Asp Phe Asn Val Ser Thr Tyr Glu Phe		
370	375	380
Gly Phe Ser Leu Ile Gly Ser Val Ser Gly Lys Ala Phe Ser Arg Pro		
385	390	395
Ile Arg Tyr Ser Pro Asn Tyr Lys Asp Asp Leu Gly Asp Leu His Asp		
405	410	415
Val Lys Glu Leu Leu Arg Thr Phe Val Lys Arg Lys Asp Asp Val Thr		
420	425	430
Ile Ser Asn Ile Trp Asp Gly Phe Pro Leu Val Asp Phe Ala Lys Phe		
435	440	445
Gly Asn Ala Ala Thr Thr Pro Val Asp Pro Arg Leu Arg Lys Glu Phe		
450	455	460
Pro Asn Asp Tyr Phe Asp Arg Glu Gln Ser Ile Asn Arg Met Leu Phe		
465	470	475
Arg Gly Tyr Arg Lys Thr Ile Asp Arg Ser Trp Ala Lys Asp Gln Ala		
485	490	495
Val Leu Glu Thr Ile Phe Ser Ile Ala Gly Asn Trp Leu Thr Ala Asn		
500	505	510
Lys Ser Tyr Thr Ala Ala Tyr Phe Gly Ala Ser Gly Ile His Pro Asn		

515	520	525
Asp Asp Gln Pro Leu Val Ile	Asp Pro Trp Ser Lys Gly Thr Ile Phe	
530	535	540
Gly Val Pro Ala Pro Ser Ser Lys Val Ser Gln Tyr Gly Tyr Asp Val		
545	550	555
Ser Asn Gly Val Ile Thr Asp Leu Thr Arg Pro Ser Pro Ser Gly Thr		
565	570	575
Phe Ser Phe Ile Tyr Cys Asp Val Asp Gln Val Gln Asp Ala Gly Asp		
580	585	590
Asp Leu Gly Val Cys Tyr Gln Ile Val Arg Ser Leu Phe Asp Thr Ile		
595	600	605
Asn Asp Ala Leu Thr Thr Gly Gly Ser Phe Val Met Lys Ile Asn Phe		
610	615	620
Pro Thr Arg Gln Ile Met Asp Tyr Leu Val Glu Val Val Ala Pro Lys		
625	630	635
Phe Thr Asp Gly Val Leu Ile Lys Pro Val Val Ser Asn Asn Leu Glu		
645	650	655
Leu Phe Val Gly Phe Phe Cys Lys Val Asp Asn Arg Gly Cys His Trp		
660	665	670
Asn Ser Asp Cys Ser Arg Phe Met Phe Arg Leu His Asn Arg Tyr Asn		
675	680	685
His Leu Asp His Ala Cys Asp Tyr Ile Pro Ile Ile Gly Asn Ala Arg		
690	695	700
Glu His Pro Arg Ala Ile Ser Arg Gln Glu Phe Ala Ile Arg Asn Pro		
705	710	715
Thr Ser Ser Ser Asp Thr Leu Ser Gln Glu Ile Glu Leu Ser Leu Gly		
725	730	735
Leu Phe Ser Gln Gln Cys Ala Ala Asn Thr Ile Thr Ile Ser Arg Asn		
740	745	750
Leu Leu His Gly Met Thr Glu Ile Leu Val Ser Gly Val Val Thr Ala		
755	760	765
Ser Ser Leu Asn Arg Cys Glu Arg Leu Asp Tyr Ser Pro Thr Ile Asp		
770	775	780
Ser Thr Thr Ile Leu His Gln His Arg Glu Ile Ala Thr Ala Ser Pro		
785	790	795
Gln Leu Phe Gln Phe Glu Ala Ser Glu Trp Thr Leu Leu Ala Met Gly		
805	810	815
Tyr Asn Glu Leu Ala Ala Arg Phe Val Asn Gly Ser Ala Lys Ser Leu		
820	825	830
Val Asp Val Gly Ser Gly Pro Glu Gly Arg Ser Ile Asn Tyr Val Asp		
835	840	845
Ser Asp Ile Lys Val Thr Leu Phe Asp Gln Arg Thr Pro His Ile Asn		
850	855	860
Val Asp Trp Phe Ala Asn Val Glu Tyr Ile Gln Gly Asp Tyr Leu Gln		
865	870	875
Arg Arg Asp Trp Arg Gly Cys Thr Phe Asp Thr Ala Ile Cys Ile Phe		
885	890	895
Ser Phe Gly Ala Ala Thr Ala Gly Ser Pro Thr Gly Met Ile Glu Tyr		
900	905	910
Leu Thr Glu Leu Leu Glu Ile Leu Lys Asp Ala Gly Cys Thr Arg Ile		

915	920	925
Ile Ile Gln Leu Asn Cys Pro Leu Met Ala Lys Pro Thr Gly Val Val		
930	935	940
Ser Lys Leu Glu Ile Asp Val Ile Asn Asp Asp Tyr Tyr Phe Ile Lys		
945	950	955
Gln Gly Arg Val Glu Pro Tyr Ala Ser Pro Gln Asp Ile Leu Gly Ala		
965	970	975
Ile Thr Gln Ala Leu Pro Gln Ser Thr Val Gln Ile Lys Thr Leu Asp		
980	985	990
Asp Glu Leu Ser Trp Phe Pro Arg Ile Ile Ser Glu Gly Phe Arg Val		
995	1000	1005
Thr Thr Glu Ala Met Arg Asp Ala Ile Thr Leu Ser Lys Leu Leu Pro		
1010	1015	1020
Leu Phe Leu Ile Glu Thr Ser Lys Thr Leu Phe Arg Pro Ala Lys Tyr		
1025	1030	1035
Ile Gly Leu Val Asp Glu Val Ile Ser Ala Thr Trp Thr Val Thr Asp		
1045	1050	1055
Pro Phe Val Asp Ile Ser Val Tyr Leu Glu Asp Thr Ser Val Gly Phe		
1060	1065	1070
Phe Asn Thr Ile Glu Asn Glu Ile Ile Gly Val Glu Val Lys Ala Val		
1075	1080	1085
Phe Asp Gly Arg Gly Thr Tyr Arg Gly Thr Phe Ser Thr Asp Lys Ala		
1090	1095	1100
Gly Val Val Thr Phe Glu Gln Thr Glu Lys Asp Gly Thr Ser Thr Ile		
1105	1110	1115
Leu Gly Ser Phe Leu Cys Val Thr Gly Pro Asn Ala Val Ala Ile Thr		
1125	1130	1135
Trp Pro Ala Asn Glu Val Val Gly Asp Asn Leu Asn Val Ala Ser Leu		
1140	1145	1150
Thr Asn Asn Thr Gly Tyr Glu Leu Ile Val Ala Tyr Glu Tyr Asp Gly		
1155	1160	1165
Thr Trp Ile Gly Val Asn Ala Tyr Lys Ala Asn Val Tyr Glu Asp Ala		
1170	1175	1180
Ala Gly Asp Asp Lys Met Glu Tyr Tyr His Val Val Gly Glu Glu Lys		
1185	1190	1195
Leu Ala Trp Ala Leu Val Asp His His Tyr Gly Ser Pro Gly Ala Arg		
1205	1210	1215
Val Val Ile Pro Phe Val Trp Pro Asp Val Thr Ala Leu Pro Gly Asp		
1220	1225	1230
Val Leu Val Ala Pro Pro Tyr Ala Gly Asp Trp Leu Val Asn Val Asp		
1235	1240	1245
Gly Asn Leu Thr Ala Glu Leu His Val Asp Glu Pro Asp Glu Ile Pro		
1250	1255	1260
Ala Leu Trp Thr Leu Met Thr Arg Ser Val Ala Asn Asn Gly Ser Ser		
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Leu Ser Tyr Ile Gly Gln Ala Gly Ile Tyr Thr Phe Leu Lys Leu Pro		
1285	1290	1295

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21

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21

<210> 44
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28

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22

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16

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16