

R69065PC1-sequence listing.txt
SEQUENCE LISTING

<110> Bundesrepublik Deutschland letztvertreten durch das Robert Koch-Institut vertreten durch seinen Präsidenten
<120> A medicament for use in a method of inducing or extending a cellular cytotoxic immune response
<130> R69065PC1
<150> EP 14000971.3
<151> 2014-03-17
<160> 13
<170> PatentIn version 3.5
<210> 1
<211> 114
<212> PRT
<213> Homo sapiens
<400> 1

Met Arg Leu Leu Ile Leu Ala Leu Leu Gly Ile Cys Ser Leu Thr Ala
1 5 10 15

Tyr Ile Val Glu Gly Val Gly Ser Glu Val Ser Asp Lys Arg Thr Cys
20 25 30

Val Ser Leu Thr Thr Gln Arg Leu Pro Val Ser Arg Ile Lys Thr Tyr
35 40 45

Thr Ile Thr Glu Gly Ser Leu Arg Ala Val Ile Phe Ile Thr Lys Arg
50 55 60

Gly Leu Lys Val Cys Ala Asp Pro Gln Ala Thr Trp Val Arg Asp Val
65 70 75 80

Val Arg Ser Met Asp Arg Lys Ser Asn Thr Arg Asn Asn Met Ile Gln
85 90 95

Thr Lys Pro Thr Gly Thr Gln Gln Ser Thr Asn Thr Ala Val Thr Leu
100 105 110

Thr Gly

<210> 2
<211> 114
<212> PRT
<213> Mus musculus
<400> 2

Met Arg Leu Leu Leu Leu Thr Phe Leu Gly Val Cys Cys Leu Thr Pro
1 5 10 15

Trp Val Val Glu Gly Val Gly Thr Glu Val Leu Glu Glu Ser Ser Cys
20 25 30

R69065PC1-sequence listing.txt

Val Asn Leu Gln Thr Gln Arg Leu Pro Val Gln Lys Ile Lys Thr Tyr
35 40 45

Ile Ile Trp Glu Gly Ala Met Arg Ala Val Ile Phe Val Thr Lys Arg
50 55 60

Gly Leu Lys Ile Cys Ala Asp Pro Glu Ala Lys Trp Val Lys Ala Ala
65 70 75 80

Ile Lys Thr Val Asp Gly Arg Ala Ser Thr Arg Lys Asn Met Ala Glu
85 90 95

Thr Val Pro Thr Gly Ala Gln Arg Ser Thr Ser Thr Ala Ile Thr Leu
100 105 110

Thr Gly

<210> 3
<211> 114
<212> PRT
<213> Rattus norvegicus

<400> 3

Met Arg Leu Leu Leu Leu Thr Phe Leu Gly Val Cys Cys Phe Ala Ala
1 5 10 15

Trp Val Val Glu Gly Val Gly Thr Glu Val Leu Gln Glu Ser Ile Cys
20 25 30

Val Ser Leu Arg Thr Gln Arg Leu Pro Val Gln Lys Ile Lys Thr Tyr
35 40 45

Thr Ile Lys Glu Gly Ala Met Arg Ala Val Ile Phe Val Thr Lys Arg
50 55 60

Gly Leu Arg Ile Cys Ala Asp Pro Gln Ala Lys Trp Val Lys Thr Ala
65 70 75 80

Ile Lys Thr Val Asp Gly Arg Ala Ser Ala Ser Lys Ser Lys Ala Glu
85 90 95

Thr Ile Pro Thr Gln Ala Gln Arg Ser Ala Ser Thr Ala Val Thr Leu
100 105 110

Thr Gly

<210> 4
<211> 114
<212> PRT
<213> Human herpesvirus 8

R69065PC1-sequence listing.txt

<400> 4

Met Trp Ser Met Cys Trp Val Leu Arg Ala His Leu Gly Leu Leu Phe
1 5 10 15

Trp Val Ala Val Ile Glu Leu Cys Ala Ala Ser Gly Pro Ala Thr Ile
20 25 30

Met Ala Ser Asp Cys Cys Glu Asn Ser Leu Ser Ser Ala Arg Leu Pro
35 40 45

Pro Asp Lys Leu Ile Cys Gly Trp Tyr Trp Thr Ser Thr Val Tyr Cys
50 55 60

Arg Gln Lys Ala Val Ile Phe Val Thr His Ser Gly Arg Lys Val Cys
65 70 75 80

Gly Ser Pro Ala Lys Arg Arg Thr Arg Leu Leu Met Glu Lys His Thr
85 90 95

Glu Ile Pro Leu Ala Lys Arg Val Ala Leu Arg Ala Gly Lys Gly Leu
100 105 110

Cys Pro

<210> 5

<211> 17

<212> PRT

<213> Artificial

<220>

<223> Consensus sequence

<220>

<221> Xaa

<222> (1)..(1)

<223> Xaa = S or N

<220>

<221> Xaa

<222> (3)..(3)

<223> Xaa = any or no amino acid

<220>

<221> Xaa

<222> (4)..(4)

<223> Xaa = T or S

<220>

<221> Xaa

<222> (5)..(5)

<223> Xaa = Q or A

<220>

<221> Xaa

<222> (9)..(9)

<223> Xaa = V or P

R69065PC1-sequence listing.txt

<220>
 <221> Xaa
 <222> (10)..(10)
 <223> Xaa = any amino acid

<220>
 <221> Xaa
 <222> (11)..(11)
 <223> Xaa = K or R

<220>
 <221> Xaa
 <222> (12)..(12)
 <223> Xaa = I or L

<220>
 <221> Xaa
 <222> (13)..(13)
 <223> Xaa = K or I

<220>
 <221> Xaa
 <222> (14)..(14)
 <223> Xaa = any or no amino acid

<220>
 <221> Xaa
 <222> (15)..(15)
 <223> Xaa = T or G

<220>
 <221> Xaa
 <222> (16)..(16)
 <223> Xaa = any or no amino acid

<400> 5

Xaa Leu Xaa Xaa Xaa Arg Leu Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

Tyr

<210> 6
 <211> 17
 <212> PRT
 <213> Artificial

<220>
 <223> consensus domain

<220>
 <221> Xaa
 <222> (1)..(1)
 <223> Xaa = R or K

<220>
 <221> Xaa
 <222> (6)..(6)
 <223> Xaa = I or V

<220>
 <221> Xaa
 <222> (8)..(8)
 <223> Xaa = K or H

R69065PC1-sequence listing.txt

<220>
 <221> Xaa
 <222> (9)..(9)
 <223> Xaa = R or S

<220>
 <221> Xaa
 <222> (11)..(11)
 <223> Xaa = L or R

<220>
 <221> Xaa
 <222> (12)..(12)
 <223> Xaa = K or R

<220>
 <221> Xaa
 <222> (13)..(13)
 <223> Xaa = I or V

<220>
 <221> Xaa
 <222> (15)..(15)
 <223> Xaa = A or G

<220>
 <221> Xaa
 <222> (16)..(16)
 <223> Xaa = D or S

<400> 6

Xaa Ala Val Ile Phe Xaa Thr Xaa Xaa Gly Xaa Xaa Xaa Cys Xaa Xaa
 1 5 10 15

Pro

<210> 7
 <211> 58
 <212> PRT
 <213> Artificial

<220>
 <223> consensus sequence

<220>
 <221> Xaa
 <222> (1)..(57)
 <223> Xaa = any or no amino acid

<400> 7

Xaa Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa
 1 5 10 15

Leu Xaa Xaa Xaa Arg Leu Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr
 20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala Val Ile Phe Xaa Thr
 35 40 45

Xaa Xaa Gly Xaa Xaa Xaa Cys Xaa Xaa Pro
 Seite 5

<210> 8
<211> 58
<212> PRT
<213> Artificial

<220>
<223> consensus sequence

<220>
<221> Xaa
<222> (1)..(1)
<223> Xaa = V or S

<220>
<221> Xaa
<222> (3)..(3)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (4)..(4)
<223> Xaa = E or A

<220>
<221> Xaa
<222> (5)..(5)
<223> Xaa = V or T

<220>
<221> Xaa
<222> (6)..(12)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (14)..(14)
<223> Xaa = V or E

<220>
<221> Xaa
<222> (15)..(15)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (16)..(16)
<223> Xaa = S or N

<220>
<221> Xaa
<222> (18)..(18)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (19)..(19)
<223> Xaa = T or S

<220>
<221> Xaa
<222> (20)..(20)
<223> Xaa = Q or A

<220>
<221> Xaa

<222> (24)..(24)
<223> Xaa = V or P

<220>
<221> Xaa
<222> (25)..(25)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (26)..(26)
<223> Xaa = K or R

<220>
<221> Xaa
<222> (27)..(27)
<223> Xaa = I or L

<220>
<221> Xaa
<222> (28)..(28)
<223> Xaa = K or I

<220>
<221> Xaa
<222> (29)..(29)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (30)..(30)
<223> Xaa = T or G

<220>
<221> Xaa
<222> (31)..(31)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (33)..(33)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (34)..(34)
<223> Xaa = I or T

<220>
<221> Xaa
<222> (35)..(35)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (36)..(36)
<223> Xaa = E or T

<220>
<221> Xaa
<222> (37)..(37)
<223> Xaa = G or V

<220>
<221> Xaa
<222> (38)..(41)
<223> Xaa = any or no amino acid

<220>

R69065PC1-sequence listing.txt

<221> Xaa
<222> (42)..(42)
<223> Xaa = R or K

<220>
<221> Xaa
<222> (47)..(47)
<223> Xaa = V or I

<220>
<221> Xaa
<222> (49)..(49)
<223> Xaa = K or H

<220>
<221> Xaa
<222> (50)..(50)
<223> Xaa = R or S

<220>
<221> Xaa
<222> (52)..(52)
<223> Xaa = L or R

<220>
<221> Xaa
<222> (53)..(53)
<223> Xaa = K or R

<220>
<221> Xaa
<222> (54)..(54)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (56)..(56)
<223> Xaa = A or G

<220>
<221> Xaa
<222> (57)..(57)
<223> Xaa = D or S

<400> 8

Xaa Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa
1 5 10 15

Leu Xaa Xaa Xaa Arg Leu Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala Val Ile Phe Xaa Thr
35 40 45

Xaa Xaa Gly Xaa Xaa Xaa Cys Xaa Xaa Pro
50 55

<210> 9
<211> 93
<212> PRT
<213> Artificial

<220>
<223> consensus sequence


```

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (6)..(10)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (15)..(15)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (22)..(23)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (28)..(28)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (30)..(30)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (33)..(34)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (40)..(40)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (46)..(47)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (52)..(52)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (54)..(54)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (57)..(63)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature

```

R69065PC1-sequence listing.txt

```

<222> (65)..(75)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (77)..(77)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (80)..(81)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (83)..(83)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (85)..(86)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (89)..(89)
<223> Xaa can be any naturally occurring amino acid

<400> 9
Val Gly Xaa Glu Val Xaa Xaa Xaa Xaa Xaa Cys Val Xaa Leu Xaa Thr
1      5      10      15

Gln Arg Leu Pro Val Xaa Xaa Ile Lys Thr Tyr Xaa Ile Xaa Glu Gly
20      25      30

Xaa Xaa Arg Ala Val Ile Phe Xaa Thr Lys Arg Gly Leu Xaa Xaa Cys
35      40      45

Ala Asp Pro Xaa Ala Xaa Trp Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp
50      55      60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Xaa Pro Thr Xaa
65      70      75      80

Xaa Gln Xaa Ser Xaa Xaa Thr Ala Xaa Thr Leu Thr Gly
85      90

<210> 10
<211> 93
<212> PRT
<213> Artificial

<220>
<223> consensus sequence

<220>
<221> Xaa
<222> (3)..(3)
<223> Xaa = T or S

<220>

```

R69065PC1-sequence listing.txt

```

<221> Xaa
<222> (6)..(6)
<223> Xaa = L or S

<220>
<221> Xaa
<222> (7)..(7)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (8)..(8)
<223> Xaa = E or K

<220>
<221> Xaa
<222> (9)..(9)
<223> Xaa = S or R

<220>
<221> Xaa
<222> (10)..(10)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (13)..(13)
<223> Xaa = S or N

<220>
<221> Xaa
<222> (15)..(15)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (22)..(22)
<223> Xaa = Q or S

<220>
<221> Xaa
<222> (23)..(23)
<223> Xaa = K or R

<220>
<221> Xaa
<222> (28)..(28)
<223> Xaa = T or I

<220>
<221> Xaa
<222> (30)..(30)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (33)..(33)
<223> Xaa = A or S

<220>
<221> Xaa
<222> (34)..(34)
<223> Xaa = M or L

<220>
<221> Xaa
<222> (40)..(40)
<223> Xaa = V or I

```

R69065PC1-sequence listing.txt

```

<220>
<221> Xaa
<222> (46)..(46)
<223> Xaa = K or R

<220>
<221> Xaa
<222> (47)..(47)
<223> Xaa = I or V

<220>
<221> Xaa
<222> (52)..(52)
<223> Xaa = Q or E

<220>
<221> Xaa
<222> (54)..(54)
<223> Xaa = K or T

<220>
<221> Xaa
<222> (57)..(57)
<223> Xaa = K or R

<220>
<221> Xaa
<222> (58)..(58)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (59)..(59)
<223> Xaa = A or V

<220>
<221> Xaa
<222> (60)..(60)
<223> Xaa = I or V

<220>
<221> Xaa
<222> (61)..(61)
<223> Xaa = K or R

<220>
<221> Xaa
<222> (62)..(62)
<223> Xaa = T or S

<220>
<221> Xaa
<222> (63)..(63)
<223> Xaa = V or M

<220>
<221> Xaa
<222> (65)..(65)
<223> Xaa = G or R

<220>
<221> Xaa
<222> (66)..(66)
<223> Xaa = R or K

<220>
<221> Xaa
<222> (67)..(67)
<223> Xaa = A or S

```

R69065PC1-sequence listing.txt

```

<220>
<221> Xaa
<222> (68)..(68)
<223> Xaa = S or N

<220>
<221> Xaa
<222> (69)..(69)
<223> Xaa = T or A

<220>
<221> Xaa
<222> (70)..(70)
<223> Xaa = R or S

<220>
<221> Xaa
<222> (71)..(71)
<223> Xaa = K or N

<220>
<221> Xaa
<222> (72)..(72)
<223> Xaa = N or S

<220>
<221> Xaa
<222> (73)..(73)
<223> Xaa = M or K

<220>
<221> Xaa
<222> (74)..(74)
<223> Xaa = A or I

<220>
<221> Xaa
<222> (75)..(75)
<223> Xaa = E or Q

<220>
<221> Xaa
<222> (77)..(77)
<223> Xaa = any or no amino acid

<220>
<221> Xaa
<222> (80)..(80)
<223> Xaa = G or Q

<220>
<221> Xaa
<222> (81)..(81)
<223> Xaa = A or T

<220>
<221> Xaa
<222> (83)..(83)
<223> Xaa = R or Q

<220>
<221> Xaa
<222> (85)..(85)
<223> Xaa = T or A

<220>
<221> Xaa
<222> (86)..(86)

```

R69065PC1-sequence listing.txt

<223> Xaa = S or N

<220>

<221> Xaa

<222> (89)..(89)

<223> Xaa = V or I

<400> 10

Val Gly Xaa Glu Val Xaa Xaa Xaa Xaa Xaa Cys Val Xaa Leu Xaa Thr
1 5 10 15

Gln Arg Leu Pro Val Xaa Xaa Ile Lys Thr Tyr Xaa Ile Xaa Glu Gly
20 25 30

Xaa Xaa Arg Ala Val Ile Phe Xaa Thr Lys Arg Gly Leu Xaa Xaa Cys
35 40 45

Ala Asp Pro Xaa Ala Xaa Trp Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Xaa Pro Thr Xaa
65 70 75 80

Xaa Gln Xaa Ser Xaa Xaa Thr Ala Xaa Thr Leu Thr Gly
85 90

<210> 11

<211> 8

<212> PRT

<213> Artificial

<220>

<223> OVA peptide

<400> 11

Ser Ile Ile Asn Phe Glu Lys Leu
1 5

<210> 12

<211> 333

<212> PRT

<213> Homo sapiens

<400> 12

Met Glu Ser Ser Gly Asn Pro Glu Ser Thr Thr Phe Phe Tyr Tyr Asp
1 5 10 15

Leu Gln Ser Gln Pro Cys Glu Asn Gln Ala Trp Val Phe Ala Thr Leu
20 25 30

Ala Thr Thr Val Leu Tyr Cys Leu Val Phe Leu Leu Ser Leu Val Gly
35 40 45

Asn Ser Leu Val Leu Trp Val Leu Val Lys Tyr Glu Ser Leu Glu Ser
50 55 60

R69065PC1-sequence listing.txt

Leu Thr Asn Ile Phe Ile Leu Asn Leu Cys Leu Ser Asp Leu Val Phe
 65 70 75 80
 Ala Cys Leu Leu Pro Val Trp Ile Ser Pro Tyr His Trp Gly Trp Val
 85 90 95
 Leu Gly Asp Phe Leu Cys Lys Leu Leu Asn Met Ile Phe Ser Ile Ser
 100 105 110
 Leu Tyr Ser Ser Ile Phe Phe Leu Thr Ile Met Thr Ile His Arg Tyr
 115 120 125
 Leu Ser Val Val Ser Pro Leu Ser Thr Leu Arg Val Pro Thr Leu Arg
 130 135 140
 Cys Arg Val Leu Val Thr Met Ala Val Trp Val Ala Ser Ile Leu Ser
 145 150 155 160
 Ser Ile Leu Asp Thr Ile Phe His Lys Val Leu Ser Ser Gly Cys Asp
 165 170 175
 Tyr Ser Glu Leu Thr Trp Tyr Leu Thr Ser Val Tyr Gln His Asn Leu
 180 185 190
 Phe Phe Leu Leu Ser Leu Gly Ile Ile Leu Phe Cys Tyr Val Glu Ile
 195 200 205
 Leu Arg Thr Leu Phe Arg Ser Arg Ser Lys Arg Arg His Arg Thr Val
 210 215 220
 Lys Leu Ile Phe Ala Ile Val Val Ala Tyr Phe Leu Ser Trp Gly Pro
 225 230 235 240
 Tyr Asn Phe Thr Leu Phe Leu Gln Thr Leu Phe Arg Thr Gln Ile Ile
 245 250 255
 Arg Ser Cys Glu Ala Lys Gln Gln Leu Glu Tyr Ala Leu Leu Ile Cys
 260 265 270
 Arg Asn Leu Ala Phe Ser His Cys Cys Phe Asn Pro Val Leu Tyr Val
 275 280 285
 Phe Val Gly Val Lys Phe Arg Thr His Leu Lys His Val Leu Arg Gln
 290 295 300
 Phe Trp Phe Cys Arg Leu Gln Ala Pro Ser Pro Ala Ser Ile Pro His
 305 310 315 320
 Ser Pro Gly Ala Phe Ala Tyr Glu Gly Ala Ser Phe Tyr
 325 330

R69065PC1-sequence listing.txt

<210> 13
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> R9-SIINFEKL

<400> 13

Arg Arg Arg Arg Arg Arg Arg Arg Arg Gly Tyr Pro Tyr Asp Val Pro
 1 5 10 15

Asp Tyr Ala Leu Glu Gln Leu Glu Ser Ile Ile Asn Phe Glu Lys Leu
 20 25 30

Thr Glu Trp Thr Ser
 35