

SEQUENCE LISTING

<110> Max-Delbrueck-Centrum fuer Molekulare Medizin
 <120> Fusion polypeptide comprising S-antigen repeat units
 <130> MD01P008WO
 <150> EP 07019953.4
 <151> 2007-10-11
 <160> 13
 <170> PatentIn version 3.5
 <210> 1
 <211> 8
 <212> PRT
 <213> Plasmodium falciparum

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Ala Xaa Lys Ser Asp Glu Ala Glu
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<210> 2
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 <212> PRT
 <213> Plasmodium falciparum

<400> 2

Ser Glu Ala Gly Thr Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly
 1 5 10 15

<210> 3
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 <212> PRT
 <213> Plasmodium falciparum

<400> 3

Pro Ala Lys Ala Ser Gln Gly Gly Leu Glu Asp
 1 5 10

<210> 4
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 <212> PRT
 <213> Plasmodium falciparum

<400> 4

Gly Pro Asn Ser Asp Gly Asp Lys
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<210> 5

<211> 8
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Glu Asp Xaa Val Ser Asn Gly Xaa
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<210> 6
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<212> PRT
<213> Plasmodium falciparum

<400> 6

Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr
1 5 10

<210> 7
<211> 265
<212> PRT
<213> Plasmodium falciparum

<400> 7

Met Asn Arg Ile Leu Ser Val Thr Phe Tyr Leu Phe Phe Ile Tyr Leu
1 5 10 15

Tyr Ile Tyr Glu Thr Tyr Gly Lys Val Lys Asn Thr Asp Lys Glu Leu
20 25 30

Ser Asp Ile Tyr Gly Thr Lys Tyr Tyr Leu Arg Ser Gly Phe Phe Asn
35 40 45

Ser Lys Lys Cys Lys Gly His Lys Tyr Glu Asp Leu Gln Ala Glu Gly
50 55 60

Glu Gly Glu Asn Asp Lys Glu Glu Asp Ser Asn Asn Glu Glu Met Asn
65 70 75 80

Ile Asp Glu Glu Asn Gly Leu Ile Glu Gly Gln Gly Glu Ser Glu Asp
85 90 95

Pro Ala Lys Ala Ser Gln Gly Gly Leu Glu Asp Pro Ala Lys Ala Ser
100 105 110

Gln Gly Gly Leu Glu Asp Pro Ala Lys Ala Ser Gln Gly Gly Leu Glu
115 120 125

Asp Pro Ala Lys Ala Ser Gln Gly Gly Leu Glu Asp Pro Ala Lys Ala
130 135 140

Ser Gln Gly Gly Leu Glu Asp Pro Ala Lys Ala Ser Gln Gly Gly Leu
145 150 155 160

Glu Asp Pro Ala Lys Ala Ser Gln Gly Gly Leu Glu Asp Pro Ala Lys
165 170 175

Ala Ser Gln Gly Gly Leu Glu Asp Pro Ala Lys Ala Ser Gln Gly Gly
180 185 190

Leu Glu Asp Pro Ala Lys Ala Ser Gln Gly Gly Leu Glu Asp Pro Ala
195 200 205

Lys Ala Ser Gln Gly Gly Leu Glu Asp Pro Ala Lys Ala Ser Gln Gly
210 215 220

Gly Leu Glu Asp Pro Ala Lys Ala Ser Gln Gly Gly Ala Glu Gly His
225 230 235 240

Gly Lys His Ala Pro Asn Lys Glu Asn Lys Asn Lys Asn Lys Glu Ser
245 250 255

Ile Lys Asn Ile Met Asn Met Phe Ile
260 265

<210> 8
<211> 640
<212> PRT
<213> Plasmodium falciparum

<400> 8

Met Asn Arg Ile Leu Ser Val Ser Phe Tyr Leu Phe Phe Leu Tyr Leu
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Tyr Ile Tyr Lys Thr Tyr Gly Lys Val Lys Asn Thr Asp His Glu Leu
20 25 30

Ser Asn Ile Tyr Gly Ile Lys Tyr Tyr Leu Arg Asn Gly Leu Ser Asp
35 40 45

Lys Lys Asn Gly Lys Gly Gln Lys Tyr Gln Asp Leu Glu Glu Asp Glu
50 55 60

Asn Asp Asp Glu Glu Asp Ser Asn Ser Glu Glu Ser Asn Asn Asp Glu
65 70 75 80

Glu Asn Lys Leu Ile Glu Gly Gln Glu Gly Pro Asn Ser Asp Gly Asp
 85 90 95
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 100 105 110
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 115 120 125
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 130 135 140
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 145 150 155 160
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 165 170 175
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 180 185 190
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 195 200 205
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 210 215 220
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 225 230 235 240
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 245 250 255
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 260 265 270
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 275 280 285
 Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
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Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
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Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
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Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
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Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 545 550 555 560

Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 565 570 575

Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 580 585 590

Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly Asp
 595 600 605

Lys Gly Pro Asn Ser Asp Gly Glu His Ser Arg Ser Lys Asn Asp Asn
 610 615 620

Lys Lys Lys Lys Ser Lys Lys Asn Ile Ile Asn Met Phe Ile Gly Met
 625 630 635 640

<210> 9
 <211> 585
 <212> PRT
 <213> Plasmodium falciparum

<400> 9

Met Asn Arg Ile Leu Ser Val Thr Leu Cys Leu Phe Phe Ile Tyr Leu
 1 5 10 15

Tyr Ile Tyr Lys Thr Tyr Gly Lys Val Lys Asn Thr Asp Glu Gly Leu
 20 25 30

Ser Asn Ile Tyr Gly Ala Lys Tyr Tyr Leu Arg Ser Gly Leu Phe Asn
 35 40 45

Glu Lys Asn Gly Lys Gly Gln Lys Tyr Glu Asp Leu Glu Glu Glu Lys
 50 55 60

Glu Gly Glu Asn Asp Asp Glu Glu Asp Ser Asn Ser Glu Glu Ser Asn
 65 70 75 80

Asn Asp Glu Glu Asn Glu Leu Ile Lys Gly Gln Glu Gly Val Glu Gln
 85 90 95

Glu Thr His Gly Ser Glu Asp Glu Val Ser Asn Gly Arg Glu Asp Lys
 100 105 110

Val Ser Asn Gly Gly Glu Asp Glu Val Ser Asn Gly Gly Glu Asp Glu
 115 120 125

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Gly Glu Asp Glu
 130 135 140

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Gly Glu Asp Glu
 145 150 155 160

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Gly Glu Asp Glu
 165 170 175

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Gly Glu Asp Glu
 180 185 190

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Arg Glu Asp Lys
 195 200 205

Val Ser Asn Gly Gly Glu Asp Glu Val Ser Asn Gly Arg Glu Asp Lys
 210 215 220

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Gly Glu Asp Glu
 225 230 235 240

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Gly Glu Asp Glu
515 520 525

Val Ser Asn Gly Arg Glu Asp Lys Val Ser Asn Gly Arg Glu Asp Glu
530 535 540

Val Ser Asn Gly Arg Glu Asp Lys Gly Gly Ala Gly Thr Asp Gly Glu
545 550 555 560

Leu Ser His Asn Ser Glu Ser His Thr Lys Asn Lys Lys Ser Lys Asn
565 570 575

Ser Ile Ile Asn Met Leu Ile Gly Met
580 585

<210> 10
<211> 309
<212> PRT
<213> Plasmodium falciparum

<400> 10

Met Asn Arg Ile Leu Ser Val Ser Phe Tyr Leu Phe Phe Leu Tyr Leu
1 5 10 15

Tyr Ile Tyr Lys Thr Tyr Gly Lys Val Lys Asn Thr Asp Gln Glu Ile
20 25 30

Ser Asn Ile Tyr Gly Thr Asn Tyr Tyr Leu Arg Asn Gly Phe Leu Asn
35 40 45

Gly Lys Asn Gly Lys Gly Asn Lys Tyr Glu Asp Leu Gln Glu Glu Gly
50 55 60

Glu Gly Glu Asn Asp Asp Glu Glu His Ser Asn Ser Glu Glu Ser Asp
65 70 75 80

Asn Asp Glu Glu Asn Glu Ile Ile Val Gly Gln Asp Glu Ala Pro Lys
85 90 95

Ser Asp Glu Ala Glu Ala Leu Lys Ser Asp Glu Ala Glu Ala Leu Lys
100 105 110

Ser Asp Glu Ala Glu Ala Arg Lys Ser Asp Glu Ala Glu Ala Leu Lys
115 120 125

Ser Asp Glu Ala Glu Ala Arg Lys Ser Asp Glu Ala Glu Ala Leu Lys
130 135 140

Ser Asp Glu Ala Glu Ala Leu Lys Ser Asp Glu Ala Glu Ala Arg Lys
145 150 155 160

Ser Asp Glu Ala Glu Ala Leu Lys Ser Asp Glu Ala Glu Ala Leu Lys
Seite 8

165

170

175

Ser Asp Glu Ala Glu Ala Arg Lys Ser Asp Glu Ala Glu Ala Arg Lys
 180 185 190

Ser Asp Glu Ala Glu Ala Arg Lys Ser Asp Glu Ala Glu Ala Arg Lys
 195 200 205

Ser Asp Glu Ala Glu Ala Leu Lys Ser Asp Glu Ala Glu Ala Arg Lys
 210 215 220

Ser Asp Glu Ala Glu Ala Arg Lys Ser Asp Glu Ala Glu Ala Leu Lys
 225 230 235 240

Ser Asp Glu Ala Glu Ala Arg Lys Ser Asp Glu Ala Glu Ala Arg Lys
 245 250 255

Ser Glu Ala Gly Thr Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser
 260 265 270

Glu Ala Gly Thr Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser Gly
 275 280 285

Gly Glu His Ser His Asn Lys Lys Lys Ser Lys Lys Ser Ile Met Asn
 290 295 300

Met Leu Ile Leu Met
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<210> 11
 <211> 76
 <212> PRT
 <213> Plasmodium falciparum

<400> 11

Glu Phe Arg Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly
 1 5 10 15

Asp Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly
 20 25 30

Asp Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly
 35 40 45

Asp Lys Gly Pro Asn Ser Asp Gly Asp Lys Gly Pro Asn Ser Asp Gly
 50 55 60

Asp Lys Gly Pro Asn Ser Asp Gly Asp Thr Glu Phe
 65 70 75

<210> 12
 <211> 375
 <212> PRT

<213> Plasmodium falciparum

<400> 12

Met Asn Arg Ile Leu Ser Val Ser Phe Tyr Leu Phe Phe Leu Tyr Leu
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Tyr Ile Tyr Lys Thr Tyr Gly Lys Val Lys Asn Thr Asp Gln Glu Ile
20 25 30

Ser Asn Ile Tyr Gly Thr Asn Tyr Tyr Leu Arg Asn Gly Phe Leu Asn
35 40 45

Gly Lys Asn Gly Lys Gly Asn Lys Tyr Glu Asp Leu Gln Glu Glu Gly
50 55 60

Glu Gly Glu Asn Asp Asp Glu Glu His Ser Asn Ser Glu Glu Ser Asp
65 70 75 80

Asn Asp Glu Glu Asn Glu Ile Ile Val Gly Gln Asp Gly Ser Asp Gln
85 90 95

Glu Val Lys Val Gln Lys Glu Gln Gly Gly Pro Gly Ser Glu Gly Pro
100 105 110

Lys Gly Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Gly
115 120 125

Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser Glu Gly
130 135 140

Pro Lys Gly Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly
145 150 155 160

Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser Glu
165 170 175

Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr
180 185 190

Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser
195 200 205

Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly
210 215 220

Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly
225 230 235 240

Ser Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys
245 250 255

Gly Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Gly Pro
Seite 10

260	265	270
Gly Ser Glu Gly Pro Lys Gly Thr	Gly Gly Pro Gly Ser Glu Ser Pro	
275	280	285
Lys Gly Thr Gly Gly Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Gly		
290	295	300
Pro Gly Ser Glu Gly Pro Lys Gly Thr Gly Pro Lys Gly Thr Gly Gly		
305	310	315
Pro Gly Ser Glu Ala Gly Thr Glu Gly Pro Lys Gly Thr Gly Gly Pro		
325	330	335
Gly Ser Glu Ala Gly Thr Glu Gly Pro Lys Gly Thr Gly Gly Pro Gly		
340	345	350
Ser Gly Gly Glu His Ser His Asn Lys Lys Lys Ser Lys Lys Ser Ile		
355	360	365
Met Asn Met Leu Ile Gly Val		
370	375	
<210> 13		
<211> 11		
<212> PRT		
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<400> 13		
Gly Leu Glu Asp Pro Ala Lys Ala Ser Gln Gly		
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