

# SEQUENCE LISTING

<110> The University of Tokyo  
Osaka University

<120> A highly versatile method for granting new binding specificity to  
antibody

<130> T0529AKP0012

<150> JP2018-144345

<151> 2018-07-31

<160> 16

<170> PatentIn version 3.5

<210> 1

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> variable region of cyclic peptide mP6-9

<400> 1

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Tyr | Ile | Glu | Arg | Trp | Thr | Gly | Arg | Leu | Ile | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |

<210> 2

<211> 14

<212> PRT

<213> Artificial Sequence

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<223> variable region of cyclic peptide aMD4

<400> 2

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gln | Phe | Asn | Arg | Arg | Thr | His | Glu | Val | Trp | Asn | Leu | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     |

<210> 3

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<223> variable region of cyclic peptide aMD5

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Trp Tyr Tyr Ala Trp Asp Gln Thr Tyr Lys Ala Phe Pro  
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Ala Ser Phe Pro Glu Glu Leu Asp Glu Trp Tyr Val Ala Tyr Gly  
 1 5 10 15

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Arg Gln Ala Ser Pro Lys Phe Thr Phe Trp Ser  
 1 5 10

<210> 6  
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 <213> Homo sapiens

<400> 6

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly  
 1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met  
 20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His  
 35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val  
 50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr  
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly  
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile  
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val  
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser  
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu  
145 150 155 160

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro  
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val  
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met  
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser  
210 215 220

Pro Gly Lys  
225

<210> 7  
<211> 208  
<212> PRT  
<213> Homo sapiens

<400> 7

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg

|                                                                 |     |     |     |
|-----------------------------------------------------------------|-----|-----|-----|
| 1                                                               | 5   | 10  | 15  |
| Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro | 20  | 25  | 30  |
| Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala | 35  | 40  | 45  |
| Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val | 50  | 55  | 60  |
| Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr | 65  | 70  | 75  |
| Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr | 85  | 90  | 95  |
| Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu | 100 | 105 | 110 |
| Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys | 115 | 120 | 125 |
| Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser | 130 | 135 | 140 |
| Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp | 145 | 150 | 155 |
| Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser | 165 | 170 | 175 |
| Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala | 180 | 185 | 190 |
| Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys | 195 | 200 | 205 |
| <210> 8                                                         |     |     |     |
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| <212> PRT                                                       |     |     |     |

<213> Homo sapiens

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Ser His Glu Asp Pro  
1 5

<210> 9

<211> 4

<212> PRT

<213> Homo sapiens

<400> 9

Tyr Asn Ser Thr  
1

<210> 10

<211> 7

<212> PRT

<213> Homo sapiens

<400> 10

Asn Lys Ala Leu Pro Ala Pro  
1 5

<210> 11

<211> 4

<212> PRT

<213> Homo sapiens

<400> 11

Val Asp Gly Val  
1

<210> 12

<211> 3

<212> PRT

<213> Homo sapiens

<400> 12

Lys Gly Gln  
1

<210> 13

<211> 4

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Ser Asp Gly Ser  
1

<210> 14  
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Thr Lys Asn Gln  
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<400> 15

Ser Asn Gly  
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<210> 16  
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<400> 16

Gln Gln Gly Asn Val  
1 5