

354194_1.txt
SEQUENCE LISTING

<110> The University of Tokyo

<120> Logical engineering of D- and T-arms of tRNA that enhances
D-amino acid and beta amino acid incorporation

<130> T0529AJP0016

<150> JP2017-200356
<151> 2017-10-16

<160> 112

<170> PatentIn version 3.5

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<211> 59

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gaagatcg 68

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<212> DNA

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<223> Extension primer (reverse) for tRNA, Pro1E2(GUG)

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<212> DNA

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uaa                                                                           63

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<221> misc_feature
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uaa                                                                           63

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gacgacaagu aa                                                                72

<210> 81
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<223> mRNA (mR5) for D-amino acid

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gacgacaagu aa 72

<210> 83

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<212> RNA

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<223> mRNA (mR6) for D-amino acid

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auguacaaga aguacaaaaa guacaaaaauu uacacuuaca uuuacacuga cuacaaggac 60

gacgacgaca aguaa 75

<210> 84

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<223> mRNA (mR7) for D-amino acid

<400> 84

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gacaaguuaa 69

<210> 85
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gacaaguuaa 69

<210> 86
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<400> 87
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uua 63

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<213> Artificial Sequence

<220>

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<400> 88

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uaa 63

<210> 89

<211> 63

<212> RNA

<213> Artificial Sequence

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<223> mRNA (mR3-3) for beta amino acid

<400> 89

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uaa 63

<210> 90

<211> 66

<212> RNA

<213> Artificial Sequence

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<223> mRNA (mR3-4) for beta amino acid

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aaguuaa 66

<210> 91

<211> 69

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<400> 91

354194_1.txt

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gacaaguuaa 69

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<210> 93
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<210> 94
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<210> 95

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<210> 96
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 gacgacaagu aa 72

<210> 97
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<210> 98
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354194_1.txt

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<210> 99
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<210> 101
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<223> N-Formylmethionine

<220>

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<223> L-beta-homoglutamine, L-beta-homomethionine or
L-beta-homophenylglycine

<400> 102

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Asp	Asp	Asp	Lys
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<211> 20

<212> PRT

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<220>

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<223> L-beta-homoglutamine, L-beta-homomethionine or
L-beta-homophenylglycine

<400> 103

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1 5 10 15

Asp Asp Asp Lys
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Met Tyr Lys Lys Tyr Lys Lys Tyr Lys Xaa Xaa Xaa Asp Tyr Lys Asp
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Asp Asp Asp Lys
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<210> 105
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 <212> PRT
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Met	Tyr	Lys	Lys	Tyr	Lys	Lys	Tyr	Lys	Xaa	Xaa	Xaa	Xaa	Asp	Tyr	Lys
1				5					10					15	

Asp	Asp	Asp	Asp	Lys
				20

<210> 106
 <211> 22
 <212> PRT
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<220>

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<220>

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<220>

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<223> L-beta-homomethionine

<400> 106

Met	Tyr	Lys	Lys	Tyr	Lys	Lys	Tyr	Lys	Xaa	Xaa	Xaa	Xaa	Xaa	Asp	Tyr
1				5					10					15	

Lys	Asp	Asp	Asp	Asp	Lys
					20

<210> 107

<211> 23

<212> PRT

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Met	Tyr	Lys	Lys	Tyr	Lys	Lys	Tyr	Lys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Asp
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Tyr Lys Asp Asp Asp Asp Lys

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<400> 108

Met	Tyr	Lys	Lys	Tyr	Lys	Lys	Tyr	Lys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10					15	

Asp	Tyr	Lys	Asp	Asp	Asp	Asp	Lys
			20				

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Met	Tyr	Lys	Lys	Tyr	Lys	Lys	Tyr	Lys	Xaa	Tyr	Xaa	Tyr	Xaa	Asp	Tyr
1				5					10					15	

Lys Asp Asp Asp Asp Lys
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1 5 10 15

Lys Asp Asp Asp Asp Lys
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<210> 111
<211> 23
<212> PRT
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<220>

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<400> 111

Met	Tyr	Lys	Lys	Tyr	Lys	Lys	Tyr	Lys	Xaa	Xaa	Tyr	Tyr	Xaa	Xaa	Asp
1				5					10					15	

Tyr	Lys	Asp	Asp	Asp	Asp	Lys
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<210> 112

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

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<400> 112

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Met Tyr Lys Lys Tyr Lys Lys Tyr Lys Xaa Xaa Tyr Tyr Xaa Xaa Asp
1           5           10           15

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Tyr Lys Asp Asp Asp Asp Lys
      20

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