

SEQUENCE LISTING

<110> JAPAN TOBACCO INC.
<120> Modified Tamavidin
<130> FA0392-11161

<150> JP 2010-293776
<151> 2010-12-28

<160> 8

<210> 1
<220> 426
<212> DNA
<213> *Pleurotus cornucopiae*

<220>
<221> CDS
<222> (1)..(426)
<223>

<400> 1

```

atg tca gac gtt caa tct tca ctc acc gga acc tgg tac aat gaa ctc      48
Met Ser Asp Val Gln Ser Ser Leu Thr Gly Thr Trp Tyr Asn Glu Leu
1      5      10      15

aac tcc aag atg gaa ttg act gca aac aaa gac ggt act ctc act gga      96
Asn Ser Lys Met Glu Leu Thr Ala Asn Lys Asp Gly Thr Leu Thr Gly
20     25     30

aag tac ctc tcc aaa gtt ggg gat gtc tac gtg ccc tac cca ctc tct    144
Lys Tyr Leu Ser Lys Val Gly Asp Val Tyr Val Pro Tyr Pro Leu Ser
35     40     45

ggg cgc tat aac ctc caa ccc ccc gcg gga caa ggc gtc gct ctt ggg    192
Gly Arg Tyr Asn Leu Gln Pro Pro Ala Gly Gln Gly Val Ala Leu Gly
50     55     60

tgg gcg gta tcc tgg gag aac agt aaa att cat tcc gct acg aca tgg    240
Trp Ala Val Ser Trp Glu Asn Ser Lys Ile His Ser Ala Thr Thr Trp
65     70     75     80

agc gga cag ttc ttc tct gag tgg tct cca gtg att ctt act cag tgg    288
Ser Gly Gln Phe Phe Ser Glu Ser Ser Pro Val Ile Leu Thr Gln Trp
85     90     95

ttg ttg tca tgg agc act gcg cgt ggg gac gta tgg gaa tcc aca ctt    336
Leu Leu Ser Ser Ser Thr Ala Arg Gly Asp Val Trp Glu Ser Thr Leu
100    105    110

gtg ggg aat gat tgg ttt aca aag acg gcg cgg act gag cag cag atc    384
Val Gly Asn Asp Ser Phe Thr Lys Thr Ala Pro Thr Glu Gln Gln Ile
115    120    125

gct cat gct caa ctc cat tgt cgc gca ccg agg ttg aag taa            426
Ala His Ala Gln Leu His Cys Arg Ala Pro Arg Leu Lys
130    135    140

```

<210> 2
<211> 141
<212> PRT
<213> *Pleurotus cornucopiae*

<400> 2

```

Met Ser Asp Val Gln Ser Ser Leu Thr Gly Thr Trp Tyr Asn Glu Leu
1      5      10      15

Asn Ser Lys Met Glu Leu Thr Ala Asn Lys Asp Gly Thr Leu Thr Gly
20     25     30

Lys Tyr Leu Ser Lys Val Gly Asp Val Tyr Val Pro Tyr Pro Leu Ser
35     40     45

Gly Arg Tyr Asn Leu Gln Pro Pro Ala Gly Gln Gly Val Ala Leu Gly
50     55     60

```

Trp Ala Val Ser Trp Glu Asn Ser Lys Ile His Ser Ala Thr Thr Trp
65 70 75 80
Ser Gly Gln Phe Phe Ser Glu Ser Ser Pro Val Ile Leu Thr Gln Trp
85 90 95
Leu Leu Ser Ser Ser Thr Ala Arg Gly Asp Val Trp Glu Ser Thr Leu
100 105 110
Val Gly Asn Asp Ser Phe Thr Lys Thr Ala Pro Thr Glu Gln Gln Ile
115 120 125
Ala His Ala Gln Leu His Cys Arg Ala Pro Arg Leu Lys
130 135 140

<210> 3
<211> 426
<212> DNA
<213> Artificial Sequence

<220>
<223> TM2 N115C

<400> 3
atg tca gac gtt caa tct tca ctc acc gga acc tgg tac aat gaa ctc 48
Met Ser Asp Val Gln Ser Ser Leu Thr Gly Thr Trp Tyr Asn Glu Leu
1 5 10 15
aac tcc aag atg gaa ttg act gca aac aaa gac ggt act ctc act gga 96
Asn Ser Lys Met Glu Leu Thr Ala Asn Lys Asp Gly Thr Leu Thr Gly
20 25 30
aag tac ctc tcc aaa gtt ggg gat gtc tac gtg ccc tac cca ctc tct 144
Lys Tyr Leu Ser Lys Val Gly Asp Val Tyr Val Pro Tyr Pro Leu Ser
35 40 45
ggc cgc tat aac ctc caa ccc ccc gcg gga caa ggc gtc gct ctt ggg 192
Gly Arg Tyr Asn Leu Gln Pro Pro Ala Gly Gln Gly Val Ala Leu Gly
50 55 60
tgg gcg gta tcc tgg gag aac agt aaa att cat tcc gct acg aca tgg 240
Trp Ala Val Ser Trp Glu Asn Ser Lys Ile His Ser Ala Thr Thr Trp
65 70 75 80
agc gga cag ttc ttc tct gag icg tct cca gtg att ctt act cag tgg 288
Ser Gly Gln Phe Ser Glu Ser Ser Pro Val Ile Leu Thr Gln Trp
85 90 95
ttg ttg tca tgg agc act gcg cgt ggg gac gta tgg gaa tcc aca ctt 336
Leu Leu Ser Ser Ser Thr Ala Arg Gly Asp Val Trp Glu Ser Thr Leu
100 105 110
gtg ggg tgt gat tgg ttt aca aag acg gcg ccg aci gag cag cag aic 384
Val Gly Cys Asp Ser Phe Thr Lys Thr Ala Pro Thr Glu Gln Gln Ile
115 120 125
gct cat gct caa ctc cat tgt cgc gca ccg agg ttg aag taa 426
Ala His Ala Gln Leu His Cys Arg Ala Pro Arg Leu Lys
130 135 140

<210> 4
<211> 141
<212> PRT
<213> Artificial Sequence

<220>
<223> TM2 N115C

<400> 4
Met Ser Asp Val Gln Ser Ser Leu Thr Gly Thr Trp Tyr Asn Glu Leu
1 5 10 15

Asn Ser Lys Met Glu Leu Thr Ala Asn Lys Asp Gly Thr Leu Thr Gly
 20 25 30
 Lys Tyr Leu Ser Lys Val Gly Asp Val Tyr Val Pro Tyr Pro Leu Ser
 35 40 45
 Gly Arg Tyr Asn Leu Gln Pro Pro Ala Gly Gln Gly Val Ala Leu Gly
 50 55 60
 Trp Ala Val Ser Trp Glu Asn Ser Lys Ile His Ser Ala Thr Thr Trp
 65 70 75 80
 Ser Gly Gln Phe Phe Ser Glu Ser Ser Pro Val Ile Leu Thr Gln Trp
 85 90 95
 Leu Leu Ser Ser Ser Thr Ala Arg Gly Asp Val Trp Glu Ser Thr Leu
 100 105 110
 Val Gly Cys Asp Ser Phe Thr Lys Thr Ala Pro Thr Glu Gln Gln Ile
 115 120 125
 Ala His Ala Gln Leu His Cys Arg Ala Pro Arg Leu Lys
 130 135 140

<210> 5
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer Tm2NtermPci

<400> 5
 aaaacatgic agacgttcaa tcttc 25

<210> 6
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer Tm2Cterm8am

<400> 6
 ttgggaicct tacttcaacc tcggtgcg 28

<210> 7
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> forward primer for PCR Tm2 N115C

<400> 7
 cltgtgggt gtgattcggt t 21

<210> 8
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> reverse primer for PCR Tm2 N115C

<400> 8
 aaacgaatca cccccacaa g 21