

PCB903024PBT\_PCT.txt

&lt;110&gt; Paean Biotechnology Inc.

&lt;120&gt; MODIFIED MITOCHONDRIA AND USE THEREOF

&lt;130&gt; PCB903024PBT/PCT

&lt;150&gt; KR 10-2018-0048486

&lt;151&gt; 2018-04-26

&lt;160&gt; 92

&lt;170&gt; KoPatentIn 3.0

&lt;210&gt; 1

&lt;211&gt; 39

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; T2p53 primer

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39

&lt;210&gt; 2

&lt;211&gt; 35

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Xp53 primer

&lt;400&gt; 2

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35

&lt;210&gt; 3

&lt;211&gt; 1186

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; nucleotides sequence coding p53

&lt;400&gt; 3

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120

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360

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420

caagacctgc cctgtgcagc tgtgggttga ttccacaccc ccgcccggca cccgcgtccg

480

cgccatggcc atctacaagc agtcacagca catgacggag gttgtgaggc gctgccccca

540

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600

PCB903024PBT\_PCT.txt

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 aaagaagaaa cactggatg gagaatattt cacccttcag atccgtgggc gtgagcgctt 1020  
 cgagatgttc cgagagctga atgaggcctt ggaactcaag gatgccagg ctgggaagga 1080  
 gccagggggg agcagggctc actccagcca cctgaagtc aaaaagggtc agtctacctc 1140  
 ccgcataaa aaactcatgt tcaagacaga agggcctgac tcagac 1186

<210> 4  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NdeUB primer

<400> 4  
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<210> 5  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> T2UB primer

<400> 5  
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<210> 6  
 <211> 1460  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding UB-p53

<400> 6  
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 gacactattg aaaacgtcaa agctaaaatt caagataaag aaggatccc tccgatcag 180  
 cagagattga ttttctgtg taagcaacta gaagatggta gaacctgtc tgactacaac 240  
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PCB903024PBT\_PCT.txt

|                                                                   |      |
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| cttcctgaaa acaacgttct gtcccccttg ccgtcccaag caatggatga ttgatgctg  | 420  |
| tccccggacg atattgaaca atggttact gaagaccag gtccagatga agtcccaga    | 480  |
| atgccagagg ctgctccccg cgtggcccct gcaccagcag ctctacacc ggcggcccct  | 540  |
| gcaccagccc cctctggcc cctgtcatct tctgtccctt ccagaaaac ctaccagggc   | 600  |
| agctacggtt tccgtctggg ctcttgcac tctgggacag ccaagtctgt gacttgcacg  | 660  |
| tactcccctg cctcaacaa gatgttttgc caactggcca agacctgcc tgtgcagctg   | 720  |
| tgggttgatt ccacaccccc gcccgccacc cgcgtccgcg ccatggccat ctacaagcag | 780  |
| tcacagcaca tgacggaggt tgtgaggcgc tgccccacc atgagcgctg ctcatagc    | 840  |
| gatggtctgg cccctcctca gcatcttctc cgagtgaag gaaatttgcg tgtggagtat  | 900  |
| ttggatgaca gaaacacttt tcgacatagt gtggtgtgct cctatgagcc gcctgaggtt | 960  |
| ggctctgact gtaccacat ccaactaac tacatgtgta acagttcctg catgggcggc   | 1020 |
| atgaaccgga ggccatcct caccatcatc aactggaag actccagtgg taatctactg   | 1080 |
| ggacggaaca gctttgaggt gcgtgtttgt gcctgtcctg ggagagaccg gcgcacagag | 1140 |
| gaagagaatc tccgaagaa aggggagcct caccacgagc tgccccagg gagcactaag   | 1200 |
| cgagcactgc ccaacaacac cagctcctct cccagccaa agaagaaacc actggatgga  | 1260 |
| gaatatttca ccttcagat ccgtggcgt gagcgcttc agatgttccg agagctgaat    | 1320 |
| gaggccttgg aactcaagga tgcccaggct gggaaggagc caggggggag cagggctcac | 1380 |
| tccagccacc tgaagtcaa aaagggtcag tctacctccc gccataaaa actcatgttc   | 1440 |
| aagacagaag gcctgatag                                              | 1460 |

<210> 7  
 <211> 59  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> NdeTOM70 primer

|                                                                  |    |
|------------------------------------------------------------------|----|
| <400> 7                                                          |    |
| gaattccata tgaagagttt tataactcgg aataaaactg caattttcgc aactgttgc | 59 |

<210> 8  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> TOM70-AS primer

|                                          |    |
|------------------------------------------|----|
| <400> 8                                  |    |
| ggtagcact actattatca aacttttcgt caaaactc | 38 |

<210> 9

PCB903024PBT\_PCT.txt

<211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> TOM70UB-S primer

<400> 9  
 ggctacgtat ttatttccaa cttttcgtca aaactc 36

<210> 10  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> T2UB-AS primer

<400> 10  
 ggcaccaccg cggagtctca acac 24

<210> 11  
 <211> 1515  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding TOM70-UB-p53

<400> 11  
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 ataaccctag aggttgaacc atccgacact attgaaaacg tcaaagctaa aattcaagat 180  
 aaagaaggta tccctccgga tcagcagaga ttgatttttg ctggttaagca actagaagat 240  
 ggtagaacct tgtctgacta caacatccaa aaggaatcta ctcttcactt ggtgttgaga 300  
 ctccgcggtg gtgaggagcc gcagtcagat cctagcgtcg agccccctct ggtcaggaa 360  
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 caagcaatgg atgatttgat gctgtccccg gacgatattg aacaatggtt cactgaagac 480  
 ccagggtccag atgaagctcc cagaatgcca gaggtgtctc cccgcgtggc ccctgcacca 540  
 gcagctccta caccggcggc ccctgcacca gccccctctt ggccccgtgc atcttctgtc 600  
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 acagccaagt ctgtgacttg cacgtactcc cctgccctca acaagatgtt ttgccaaactg 720  
 gccaaagacct gccctgtgca gctgtgggtt gattccacac ccccgcccg caccgcgtc 780  
 cgcgccatgg ccatctacaa gcagtcacag cacatgacgg aggttgtgag gcgctgcccc 840  
 caccatgagc gctgctcaga tagcgtggt ctggccccctc ctacgcatct tatccgagt 900  
 gaaggaaatt tgcgtgtgga gtatttgat gacagaaaca cttttcgaca tagtgtggtg 960  
 gtgccctatg agccgcctga ggttggtct gactgtacca ccatccacta caactacatg 1020

PCB903024PBT\_PCT.txt

|                                                                   |      |
|-------------------------------------------------------------------|------|
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| gaagactcca gtggtaatct actgggacgg aacagctttg aggtgctgt ttgtgcctgt  | 1140 |
| cctgggagag accggcgcac agaggaagag aatctccgca agaaagggga gcctcaccac | 1200 |
| gagctgcccc cagggagcac taagcgagca ctgcccaaca acaccagctc ctctcccag  | 1260 |
| ccaaagaaga aaccttgga tggagaatat ttacccttc agatccgtgg gcgtgagcgc   | 1320 |
| ttcgagatgt tccgagagct gaatgaggcc ttggaactca aggatgcca ggctgggaag  | 1380 |
| gagccagggg ggagcagggc tactccagc cacctgaagt ccaaaaaggg tcagtctacc  | 1440 |
| tcccgccata aaaaactcat gttcaagaca gaaggcctg actcagacct cgagcaccac  | 1500 |
| caccaccacc actag                                                  | 1515 |

<210> 12  
 <211> 59  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> TOM70(G)3-AS primer

|                                                               |    |
|---------------------------------------------------------------|----|
| <400> 12                                                      |    |
| gccccggat cctccacccc cgctccgcc acctcataa tagtagtatg caccaatag | 59 |

<210> 13  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> (G)3UB-S primer

|                                     |    |
|-------------------------------------|----|
| <400> 13                            |    |
| ggtggaggat ccgggggagc ggaagccaaa tc | 32 |

<210> 14  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Xp53(noT) primer

|                                     |    |
|-------------------------------------|----|
| <400> 14                            |    |
| aaaaaactcg aggtctgagt caggcccttc tg | 32 |

<210> 15  
 <211> 1560  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding TOM70-(GGGS)3-UB-p53

PCB903024PBT\_PCT.txt

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 ggcggcggaa gccaaatctt cgtcaaaact ctaacagggga agactataac cctagaggtt 180  
 gaaccatccg aactattga aaacgtcaaa gctaaaattc aagataaaga aggtatccct 240  
 ccgcatcagc agagattgat ttttctggt aagcaactag aagatggtag aaccttgtct 300  
 gactacaaca tccaaaagga atctactctt cacttgggtg tgagactccg cgggtggtgag 360  
 gagccgcagt cagatcctag cgtcgagccc cctctgagtc aggaacatt ttcagacctg 420  
 tggaaactac ttctgaaaa caacgttctg tcccccttgc cgtcccaagc aatggatgat 480  
 ttgatgctgt ccccgagcga tattgaacaa tggttcactg aagaccagg tccagatgaa 540  
 gctcccagaa tgccagaggc tgctccccgc gtggcccctg caccagcagc tcctacaccg 600  
 gcggcccctg caccagcccc ctctggccc ctgtcatctt ctgtcccttc ccagaaaacc 660  
 taccagggca gctacggttt ccgtctgggc ttcttgcatc ctgggacagc caagtctgtg 720  
 acttgcacgt actcccctgc cctcaacaag atgttttggc aactggccaa gacctgccct 780  
 gtgcagctgt gggttgattc cacacccccg cccggcaccg gcgtccgcgc catggccatc 840  
 tacaagcagt cacagcacat gacggagggt gtgaggcgct gccccacca tgagcgctgc 900  
 tcagatagcg atggtctggc cctcctcag catcttatcc gagtgaagg aaatttgct 960  
 gtggagtatt tggatgacag aaacactttt cgacatagtg tgggtgtgcc ctatgagccg 1020  
 cctgaggttg gctctgactg taccaccatc cactacaact acatgtgtaa cagttcctgc 1080  
 atgggaggca tgaaccggag gccatcctc accatcatca cactggaaga ctccagtgtt 1140  
 aatctactgg gacggaacag ctttgagggt cgtgtttgtg cctgtcctgg gagagaccgg 1200  
 cgcacagagg aagagaatct ccgcaagaaa ggggagcctc accacgagct gccccagg 1260  
 agcactaagc gagcactgcc caacaacacc agtcctctc ccagccaaa gaagaaacca 1320  
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 agggctcact ccagccacct gaagtccaaa aagggtcagt ctacctccg ccataaaaaa 1500  
 ctcatgttca agacagaagg gcctgactca gacctgagc accaccacca ccaccactag 1560  
 1560

<210> 16  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> B(G)3p53

<400> 16  
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PCB903024PBT\_PCT.txt

<210> 17  
 <211> 1335  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding TOM70-(GGGS)3-p53

<400> 17  
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 ggcggcggaa gcgaggagcc gcagtcagat cctagcgtcg agccccctct gattcaggaa 180  
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 caagcaatgg atgatttgat gctgtccccg gacgatattg aacaatgggt cactgaagac 300  
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 caccatgagc gctgctcaga tagcgtggt ctggcccctc ctacgcatct tatccgagtg 720  
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 gtgccctatg agccgcctga ggttggctct gactgtacca ccatccacta caactacatg 840  
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 gaagactcca gtggaatct actgggacgg aacagctttg aggtgctgtt ttgtgcctgt 960  
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 ccaaagaaga aaccactgga tggagaatat ttacaccttc agatccgtgg gcgtgagcgc 1140  
 ttcgagatgt tccgagagct gaatgaggcc ttggaactca aggatgcccc ggctgggaag 1200  
 gagccagggg ggagcagggc tactccagc cacctgaagt caaaaaggg tcagtctacc 1260  
 tcccgcata aaaaactcat gttcaagaca gaaggcctg actcagacct cgagcaccac 1320  
 caccaccacc actag 1335

<210> 18  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Xp53(noT) primer

<400> 18

PCB903024PBT\_PCT.txt

aaaaaactcg aggtctgagt caggcccttc tg

32

<210> 19  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> XTOM7 primer

<400> 19  
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36

<210> 20  
 <211> 38  
 <212> DNA  
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<220>  
 <223> LTOM7 primer

<400> 20  
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38

<210> 21  
 <211> 1578  
 <212> DNA  
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<220>  
 <223> nucleotides sequence coding UB-p53-TOM7

<400> 21  
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 gacactattg aaaacgtcaa agctaaaatt caagataaag aaggatatcc tccggatcag 180  
 cagagattga tttttgctgg taagcaacta gaagatggta gaaccttgct tgactacaac 240  
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 tcagatccta gcgtcgagcc ccctctgagt caggaaacat tticagacct atggaaacta 360  
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 tccccggacg atattgaaca atggttcact gaagaccag gtccagatga agctccaga 480  
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 tactccctg cctcaacaa gatgttttgc caactggcca agacctgccc tgtgcagctg 720  
 tgggttgatt ccacaccccc gcccgccacc cgcgtccgcg ccatggccat ctacaagcag 780  
 tcacagcaca tgacggaggt tgtgaggcgc tgccccacc atgagcgtg ctcatagc 840  
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## PCB903024PBT\_PCT.txt

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atgaaccgga ggcccatcct caccatcatc aactggaag actccagtgg taatctactg      1080
ggacggaaca gctttgaggt gcatgtttgt gcctgtcctg ggagagaccg gcgcacagag      1140
gaagagaatc tccgaagaa aggggagcct caccacgagc tgccccagg gagcactaag      1200
cgagcactgt ccaacaacac cagctcctct ccccagccaa agaagaaacc actggatgga      1260
gaatatttca cccttcagat ccgtgggcgt gagcgcttcg agatgttccg agagctgaat      1320
gaggccttgg aactcaagga tgcccaggct gggaaggagc caggggggag cagggctcac      1380
tccagccacc tgaagtcaa aaagggtcag tctacctccc gccataaaaa actcatgttc      1440
aagacagaag ggcctgactc agacctcgag ttgcccattc gctggggctt tatccctctt      1500
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agcctacttt ggggatag                                     1578

```

```

<210>      22
<211>      35
<212>      DNA
<213>      Artificial Sequence

```

```

<220>
<223>      Rp53 primer

```

```

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```

```

<210>      23
<211>     1266
<212>      DNA
<213>      Artificial Sequence

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```

<220>
<223>      nucleotides sequence coding p53-myc/His

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gatgatttga tgctgtcccc ggacgatatt gaacaatggt tactgaaga ccaggtcca      180
gatgaagctc ccagaatgcc agaggctgct ccccgctgg cccctgcacc agcagctcct      240
acaccggcgg cccctgcacc agccccctcc tggccccctgt catcttctgt cccttcccag      300
aaaacctacc agggcagcta cggtttcgt ctgggcttct tgcatctctg gacagccaag      360
tctgtgactt gcacgtactc ccctgccctc aacaagatgt ttgccaact ggccaagacc      420
tgccctgtgc agctgtgggt tgattccaca cccccgccg gcacccgct cgcgcgatg      480
gccatctaca agcagtcaca gcacatgacg gaggttgtga ggcgctgcc ccacatgag      540
cgtgtctcag atagcgatgg tctggcccct cctcagcatc ttatccgagt ggaaggaaat      600

```

## PCB903024PBT\_PCT.txt

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ttgcgtgtgg agtatittgga tgacagaaac acttttcgac atagtgtggt ggtgccctat 660
gagccgcctg aggttggctc tgactgtacc accatccact acaactacat gtgtaacagt 720
tcctgcatgg gcggcatgaa ccggaggccc atcctcacca tcatcacact ggaagactcc 780
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ccaggagca ctaagcgagc actgccaac aacaccagct cctctcccca gccaaagaag 960
aaaccactgg atggagaata tttcaccctt cagatccgtg ggcgtgagcg cttcgagatg 1020
ttccgagagc tgaatgagc cttggaactc aaggatgccc aggctgggaa ggagccaggg 1080
gggagcaggg ctactccag ccacctgaag tccaaaaagg gtcagtctac ctccgccat 1140
aaaaaactca tgttaagac agaagggcct gactcagacc tcgagtctag agggcccttc 1200
gaacaaaaac tcatctcaga agaggatctg aatatgcata ccggtcatca tcaccatcac 1260
cattga 1266

```

```

<210> 24
<211> 51
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> T2GZMB primer

```

```

<400> 24
aaaaaaccgc ggtggtatca tcgggggaca tgaggcacat gaggccaagc c 51

```

```

<210> 25
<211> 38
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> XGZMB(noT) primer

```

```

<400> 25
aaaaaactcg aggtagcgtt tcatggtttt ctttatcc 38

```

```

<210> 26
<211> 691
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> nucleotides sequence coding GranzymeB

```

```

<400> 26
ccgcggtggt atcatcgggg gacatgagc caagccccac tccgcccct acatggctta 60
tcttatgata tgggatcaga agtctctgaa gaggtgcggt ggcttcctga tacaagacga 120
cttcgtgctg acagctgctc actgttgggg aagctccata aatgtcacct tgggggcccc 180

```

PCB903024PBT\_PCT.txt

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| caatatcaaa gaacaggagc cgacccagca gtttatccct gtgaaaagac ccatcccca   | 240 |
| tccagcctat aatcctaaga acttctccaa cgacatcatg ctactgcagc tggagagaaa  | 300 |
| ggccaagcgg accagagctg tgcagcccct caggctacct agcaacaagg cccaggtgaa  | 360 |
| gccagggcag acatgcagtg tggccggctg ggggcagacg gccccctgg gaaaacactc   | 420 |
| acacacacta caagaggatga agatgacagt gcaggaagat cgaaagtgcg aatctgactt | 480 |
| acgccattat tacgacagta ccatlgagtt gtgctgtggg gacccagaga ttaaaaagac  | 540 |
| ttcctttaag ggggactctg gaggccctct tgtgtgtaac aagggtggcc agggcattgt  | 600 |
| ctcctatgga cgaacaatg gcatgcctcc acgagcctgc accaaagtct caagctttgt   | 660 |
| acactggata aagaaaacca tgaacgcta c                                  | 691 |

<210> 27  
 <211> 1065  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding TOM70-(GGGS)3-UB-Granzyme B

|                                                                    |      |
|--------------------------------------------------------------------|------|
| <400> 27                                                           |      |
| atgaaaagt ttataactcg gaataaaact gcaattttcg caactgttgc tgctacggga   | 60   |
| accgctattg gtgcatacta ctattatgga ggtggcggaa gcgggggtgg aggatccggg  | 120  |
| ggcggcggaa gccaaatctt cgtcaaaact ctaacaggga agactataac cctagaggtt  | 180  |
| gaaccatccg aactattga aaacgtcaaa gctaaaattc aagataaaga aggtatccct   | 240  |
| ccggatcagc agagattgat tttgtgtgt aagcaactag aagatggtag aacctgtct    | 300  |
| gactacaaca tccaaaagga atctactctt cacttggtgt tgagactccg cgggtggtatc | 360  |
| atcgggggac atgaggccaa gcccactcc cgcccctaca tggcttatct tatgatctgg   | 420  |
| gatcagaagt ctctgaagag gtgcggtggc ttctgtatc gagacgactt cgtgctgaca   | 480  |
| gctgctcact gtggggaag ctccataaat gtcaccttgg gggcccacaa tatcaaagaa   | 540  |
| caggagccga cccagcagtt tatccctgtg aaaagaccca tccccatcc agcctataat   | 600  |
| cctaagaact tctccaacga catcatgcta ctgcagctgg agagaaaggc caagcggacc  | 660  |
| agagctgtgc agcccctcag gctacctagc aacaaggccc aggtgaagcc agggcagaca  | 720  |
| tgcagtgtgg ccggctgggg gcagacggcc cccctgggaa aacactcaca cacactacaa  | 780  |
| gaggatgaaga tgacagtga ggaagatga aagtgcgaat ctgacttacg ccattattac   | 840  |
| gacagtacca ttgagttgtg cgtgggggac ccagagatta aaaagacttc cttaagggg   | 900  |
| gactctggag gccctcttgt gtgtaacaag gtggcccagg gcattgtctc ctatggacga  | 960  |
| aaaatggca tgcctccacg agcctgcacc aaagtctcaa gctttgtaca ctggataaag   | 1020 |
| aaaaccatga aacgtacct cgagcaccac caccaccacc actag                   | 1065 |

<210> 28  
 <211> 1083

PCB903024PBT\_PCT.txt

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; nucleotides sequence coding UB-Granzyme B-TOM7

&lt;400&gt; 28

```

atgggcagca gccatcatca tcatcatcac agcagcggcc tggcgccgcg cggcagccat      60
atgcaaattct tcgtcaaaac tctaacaggg aagactataa ccctagaggt tgaacatcc      120
gacactattg aaaacgtcaa agctaaaatt caagataaag aaggatatcc tccggatcag      180
cagagattga tttttgctgg taagcaacta gaagatggta gaacctgtgc tgactacaac      240
atccaaaagg aatctactct tcaacttggtg ttgagactcc gcggtggtat catcggggga      300
catgaggcca agccccactc ccgcccctac atggcttata ttatgatctg ggatcagaag      360
tctctgaaga ggtgcggtgg ctctctgata cgagacgact tcgtgctgac agctgctcac      420
tgttggggaa gctccataaa tgtcaccttg ggggcccaca atatcaaaga acaggagccg      480
accagcagt ttatccctgt gaaaagacc atccccatc cagcctataa tcttaagaac      540
ttctccaacg acatcatgct actgcagctg gagagaaagg ccaagcggac cagagctgtg      600
cagccccctca ggctacctag caacaaggcc caggatgaagc cagggcagac atgcagtgtg      660
gccggctggg ggcagacggc ccccttggga aaacactcac acacactaca agaggatgaag      720
atgacagtgc aggaagatcg aaagtgcgaa tctgacttac gccattatta cgacagtacc      780
attgagttgt gcgtggggga cccagagatt aaaaagactt cctttaaggg ggactctgga      840
ggcctcttg tgtgtaacaa ggtggcccag ggcatgtgt cctatggacg aaacaatggc      900
atgcctccac gagcctgcac caaagtctca agctttgtac actggataaa gaaaaccatg      960
aaacgctacc tcgagtttgc cattcgctgg ggctttatcc ctcttgtgat ttacctggga     1020
ttaaagaggg gtgcagatcc cggaatgcct gaaccaactg ttttgacct actttgggga     1080
tag                                                                    1083

```

&lt;210&gt; 29

&lt;211&gt; 39

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; T2RKIP primer

&lt;400&gt; 29

```

aaaaaacgc ggtggtccg tggacctcag caagtgtc      39

```

&lt;210&gt; 30

&lt;211&gt; 41

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; XRKIP(noT) primer

PCB903024PBT\_PCT.txt

<400> 30  
 aaaaaactcg agcttcccag acagctgctc gtacagtttg g

41

<210> 31  
 <211> 568  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding RKIP

<400> 31  
 ccgcggtggt ccggtggacc tcagcaagtg gtccggggccc ttgagcctgc aagaagtgga 60  
 cgagcagccg cagcaccac tgcatgtcac ctacgccggg gcggcggtgg acgagctggg 120  
 caaagtgtcg acgccaccc aggttaagaa tagaccaccc agcatttcgt gggatgggtct 180  
 tgattcaggg aagctctaca ctttggtcct gacagacccg gatgctccca gcaggaagga 240  
 tcccaaatac agagaatggc atcatttcct ggtggtaac atgaaggga atgacatcag 300  
 cagtggcaca gtccctctcg attatgtggg ctcggggcct cccaaggga caggcctcca 360  
 ccgctatgtc tggctggttt acgagcagga caggccgcta aagtgtgacg agcccatcct 420  
 cagcaaccga tctggagacc accgtggcaa attcaagggt gcgtccttcc gtaaaaagta 480  
 tgagctcagg gccccggtgg ctggcacgtg ttaccaggcc gagtgggatg actatgtgcc 540  
 caaactgtac gacgagctgt ctgggaag 568

<210> 32  
 <211> 942  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding TOM70-(GGGS)3-UB-RKIP

<400> 32  
 atgaaaagt ttataactcg gaataaaact gcaattttcg caactgttgc tgctacggga 60  
 accgctattg gtgcatacta ctattatgga ggtggcggaa gcgggggtgg aggatccggg 120  
 ggcgggcgaa gccaaatctt cgtcaaaact ctaacaggga agactataac cctagaggtt 180  
 gaaccatccg aactattga aaacgtcaaa gctaaaattc aagataaaga aggtatccct 240  
 ccggatcagc agagattgat ttttctggt aagcaactag aagatggtag aaccttgtct 300  
 gactacaaca tccaaaagga atctactctt cacttgggtg tgagactccg cgggtgtccg 360  
 gtggacctca gcaagtggtc cgggcccttg agcctgcaag aagtggacga gcagccgcag 420  
 caccactgc atgtcaccta cgccggggcg gcggtggacg agctgggcaa agtgctgacg 480  
 cccaccagg ttaagaatag acccaccagc atttcgtggg atggtcttga ttcagggaag 540  
 ctctacacct tggctctgac agaccggat gctcccagca ggaaggatcc caaatacaga 600  
 gaatggcatc atttctggt ggtcaacatg aagggaatg acatcagcag tggcacagtc 660

## PCB903024PBT\_PCT.txt

ctctccgatt atgtgggctc ggggcctccc aagggcacag gcctccaccg ctatgtctgg 720  
 ctggtttacg agcaggacag gccgctaaag tgtgacgagc ccatcctcag caaccgatct 780  
 ggagaccacc gtggcaaatt caaggtggcg tccttccgta aaaagtatga gctcagggcc 840  
 ccggtggctg gcacgtgtta ccaggccgag tgggatgact atgtgcccaa actgtacgag 900  
 cagctgtctg ggaagctcga gcaccaccac caccaccact ag 942

<210> 33  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> T2PTEN primer

<400> 33  
 aaaaaaccgc ggtggtacag ccatcatcaa agagatcggt ag 42

<210> 34  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> XPTEN(noT) primer

<400> 34  
 aaaaaactcg aggacttttg taatttgtgt atgctg 36

<210> 35  
 <211> 1216  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding PTEN

<400> 35  
 ccgcggtggt acagccatca tcaaagagat cgtagcaga aacaaaagga gatatcaaga 60  
 ggatggattc gacttagact tgacctatat ttatccaaac attattgcta tgggatttcc 120  
 tgcagaaaga cttgaaggcg tatacaggaa caatattgat gatgtagtaa ggtttttgga 180  
 ttcaaagcat aaaaaccatt acaagatata caatctttgt gctgaaagac attatgacac 240  
 cgccaaattt aattgcagag ttgcacaata tccttttgaa gaccataacc caccacagct 300  
 agaacttata aaaccctttt gtgaagatct tgaccaatgg ctaagtgaag atgacaatca 360  
 tgttgcagca attcactgta aagctggaaa gggacgaact ggtgtaatga tatgtgcata 420  
 ttattacat cggggcaaatt ttttaaaggc acaagaggcc ctagatttct atggggaagt 480  
 aaggaccaga gacaaaaagg gagtaactat tcccagtcag aggcgctatg tgtattatta 540  
 tagctacctg ttaaagaatc atctggatta tagaccagtg gcactgttgt ttcacaagat 600  
 gatgtttgaa actattccaa tgttcagtgg cggaacttgc aatcctcagt ttgtggtctg 660

## PCB903024PBT\_PCT.txt

ccagctaaag gtgaagatat attcctccaa ttcaggaccc acacgacggg aagacaagtt 720  
catgtacttt gatttccctc agccgttacc tgtgtgtggt gatataaag tagagttctt 780  
ccacaaacag aacaagatgc taaaaaagga caaaatgttt cacttttggg taaatacatt 840  
cttcatacca ggaccagagg aaacctcaga aaaagtagaa aatggaagtc tatgtgatca 900  
agaaatcgat agcatttgca gtatagagcg tgcagataat gacaaggaat atctagtact 960  
tactttaaca aaaaatgatc ttgacaaagc aaataaagac aaagccaacc gatacttttc 1020  
tccaaatttt aagggtgaagc tgtacttcac aaaaacagta gaggagccgt caaatccaga 1080  
ggctagcagt tcaacttctg taacaccaga tgtagtgac aatgaacctg atcattatag 1140  
atattctgac accactgact ctgatccaga gaatgaacct ttgatgaag atcagcatac 1200  
acaaattaca aaagtc 1216

<210> 36  
<211> 1590  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> nucleotides sequence coding TOM70-(GGGS)3-UB-PTEN

<400> 36  
atgaaaagt ttataactcg gaataaaact gcaattttcg caactgttgc tgctacggga 60  
accgctattg gtgcatacta ctattatgga ggtggcggaa gcgggggtgg aggatccggg 120  
ggcggcggaa gccaaatctt cgtcaaaact ctaacagggg agactataac cctagaggtt 180  
gaaccatccg aactatttga aaacgtcaaa gctaaaattc aagataaaga aggtatccct 240  
ccggatcagc agagattgat ttttgcgtgt aagcaactag aagatggtag aaccttgtct 300  
gactacaaca tccaaaagga atctactctt cacttggtgt tgagactccg cgggtgttaca 360  
gccatcatca aagagatcgt tagcagaaac aaaaggagat atcaagagga tggattcgac 420  
ttagacttga cctatattta tccaaacatt attgctatgg gatttcctgc agaaagactt 480  
gaaggcgtat acaggaacaa tattgatgat gtagtaaggt ttttggattc aaagcataaa 540  
aaccattaca agatatacaa tctttgtgct gaaagacatt atgacaccgc caaatttaat 600  
tgcagagttg cacaatatcc ttttgaagac cataaccac cacagctaga acttatcaaa 660  
cccttttggt aagatcttga ccaatggcta agtgaagatg acaatcatgt tgcagcaatt 720  
cactgtaaag ctggaaaggg acgaactggt gtaatgatat gtgcatattt attacatcgg 780  
ggcaaatttt taaaggcaca agaggcccta gatttctatg gggaagtaag gaccagagac 840  
aaaaaggagg taactattcc cagtcagagg cgctatgtgt attattatag ctacctgtta 900  
aagaatcatc tggattatag accagtggca ctgttgtttc acaagatgat gtttgaaact 960  
attccaatgt tcagtggcgg aacttgcaat cctcagtttg tggcttgcca gctaaagggtg 1020  
aagatatatt cctccaattc aggacccaca cgacgggaag acaagttcat gtactttgag 1080

## PCB903024PBT\_PCT.txt

|                                                                    |      |
|--------------------------------------------------------------------|------|
| ttccctcagc cgttacctgt gtgtggatgat atcaaagtag agttcttcca caaacagaac | 1140 |
| aagatgctaa aaaaggacaa aatgtttcac ttttgggttaa atacattctt cataccagga | 1200 |
| ccagaggaaa cctcagaaaa agtagaaaat ggaagtctat gtgatcaaga aatcgatagc  | 1260 |
| atttgcagta tagagcgtgc agataatgac aaggaatatc tagtacttac tttacaaaa   | 1320 |
| aatgatcttg acaaagcaaa taaagacaaa gccaaccgat acttttctcc aaattttaag  | 1380 |
| gtgaagctgt acttcacaaa aacagtagag gagccgtcaa atccagaggc tagcagttca  | 1440 |
| acttctgtaa caccagatgt tagtgacaat gaacctgac attatagata ttctgacacc   | 1500 |
| actgactctg atccagagaa tgaacctttt gatgaagatc agcatacaca aattacaaaa  | 1560 |
| gtcctcgagc accaccacca ccaccactag                                   | 1590 |

<210> 37  
 <211> 739  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding scFvHER2

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| <400> 37                                                           |     |
| ccgcggtggt gaagtgaac ttgtgagag tggcggagga ctggtccaac cgggcggttc    | 60  |
| acttaggttc tcatgtgcag ctccaggggt cacgttcacg gactatacaa tggactgggt  | 120 |
| gaggcaagcc cctggtaagg gactggagtg ggttctgac gttaaccta attccggtgg    | 180 |
| gtccatctac aaccagcgat tcaagggacg atttactctt tcagtcgaca gaagcaaaaa  | 240 |
| cacctctac ctccagatga actccttgcg ggcagaggat acagcggctc actattgcgc   | 300 |
| gagaaacttg ggaccaagct tctacttga ctactggggg caaggaacgc ttgttacggt   | 360 |
| ttcaagcga ggtggaggaa gtggaggtgg cggttccggc ggtggcgggt cagatatata   | 420 |
| gatgacccaa tcaaccagtt ctcttagcgc gtctgtaggc gacagggtaa ccataacctg  | 480 |
| caaggcgtcc caggacgtgt caattggagt tgccctggtat cagcaaaaac ctgggaaagc | 540 |
| tccgaagctc ctgatttaca gcgcatttta ccgatatact ggtgtccctt caagggtcag  | 600 |
| tggcagtga tctgggacag actttacgct tactatcagc agtctgcaac ctgaggattt   | 660 |
| cgcgacctac tactgtcagc agtattacat ctatccgtac acgttcggtc aaggtaaaaa  | 720 |
| gtagaaaata aaacgcact                                               | 739 |

<210> 38  
 <211> 1125  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding UB-scFvHER2-TOM7

|                                                                 |    |
|-----------------------------------------------------------------|----|
| <400> 38                                                        |    |
| atgggcagca gccatcatca tcatcatcac agcagcggcc tggcgccg cggcagccat | 60 |

PCB903024PBT\_PCT.txt

|                                                                    |      |
|--------------------------------------------------------------------|------|
| atgcaaatct tcgtcaaaac tctaacaggg aagactataa ccctagaggt tgaaccatcc  | 120  |
| gacactattg aaaacgtcaa agctaaaatt caagataaag aaggtatccc tccggatcag  | 180  |
| cagagattga tttttgctgg taagcaacta gaagatggta gaaccttgct tgactacaac  | 240  |
| atccaaaagg aatctactct tcaacttggtg ttgagactcc gcggtggga agtgcaactt  | 300  |
| gttgagagtg gcggaggact ggtccaaccg ggcggttcac ttaggtcttc atgtgcagct  | 360  |
| tcagggttca cgttcacgga ctatacaatg gactgggtga ggcaagcccc tggttaaggga | 420  |
| ctggagtggg ttgctgacgt taacctaat tccggtgggt ccatctacaa ccagcgattc   | 480  |
| aagggaagat ttactctttc agtcgacaga agcaaaaaca ccctctacct ccagatgaac  | 540  |
| tccttgcggg cagaggatac agcgggtctac tattgcgcga gaaacttggg accaagcttc | 600  |
| tacttcgact actgggggca aggaacgctt gttacggttt caagcggagg tggaggaagt  | 660  |
| ggaggtggcg gttccggcgg tggcgggtca gatatacaga tgaccaatc acccagttct   | 720  |
| cttagcgcgt ctgtaggcga cagggttaacc ataacctgca aggcgtccca ggacgtgtca | 780  |
| attggagtgg cctgggtatca gcaaaaacct gggaaagctc cgaagctcct gatttacagc | 840  |
| gcactttacc gatatactgg tgtcccttca aggttcagtg gcagtggatc tgggacagac  | 900  |
| tttacgctta ctatcagcag tctgcaacct gaggatttcg cgacctacta ctgtcagcag  | 960  |
| tattacatct atccgtacac gttcgggtcaa ggtacaaagg tagaaataaa acgcactttt | 1020 |
| gccattcgct ggggctttat ccctcttgtg atttacctgg gatttaagag ggggtgcagat | 1080 |
| cccggaatgc ctgaaccaac tgttttgagc ctactttggg gatag                  | 1125 |

<210> 39  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> RscFvHER2 primer

|                                           |    |
|-------------------------------------------|----|
| <400> 39                                  |    |
| aaaaaagaat tcatggaagt gcaacttggt gagagtgg | 38 |

<210> 40  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> XTOM7(noT) primer

|                                        |    |
|----------------------------------------|----|
| <400> 40                               |    |
| aaaaaactcg agtccccaaa gtaggctcaa aacag | 35 |

<210> 41  
 <211> 924  
 <212> DNA  
 <213> Artificial Sequence

PCB903024PBT\_PCT.txt

&lt;220&gt;

&lt;223&gt; nucleotides sequence coding scFvHER2-TOM7-myc/His

&lt;400&gt; 41

```

atggaagtgc aacttggtga gagtggcgga ggactgggcc aaccggggcg ttcacttagg      60
ctctcatgtg cagcttcagg gttcacgttc acggactata caatggactg ggtgaggcaa      120
gcccttggtg agggactgga gtgggttgct gacgttaacc ctaattccgg tgggtccatc      180
tacaaccagc gattcaaggg acgatttact ctttcagtcg acagaagcaa aaacaccctc      240
tacctccaga tgaactcctt gcgggcagag gatacagcgg tctactattg cgcgagaaac      300
ttgggaccaa gcttctactt cgactactgg gggcaaggaa cgcttggtac gggttcaagc      360
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caatcaccca gttctcttag cgcgctgtga ggcgacaggg taaccataac ctgcaaggcg      480
tcccaggacg tgtcaattgg agttgcctgg tatcagcaaa aacctgggaa agctccgaag      540
ctcctgattt acagcgcata ttaccgatat actggtgtcc ctccaagggt cagtggcagt      600
ggatctggga cagactttac gcttactatc agcagctgtc aacctgagga ttctcgacac      660
tactactgtc agcagtatta catctatccg tacacgttcg gtcaaggtag aaaggtagaa      720
ataaaacgca cttttgccat tcgctggggc ttatccctc ttgtgattta cctgggattt      780
aagaggggtg cagatcccg aatgcctgaa ccaactgttt tgagcctact ttggggactc      840
gagtcctagag ggccttcga acaaaaactc atctcagaag aggatctgaa tatgcatacc      900
ggcatcatc accatcacca ttga                                           924

```

&lt;210&gt; 42

&lt;211&gt; 760

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; nucleotides sequence coding scFvMEL

&lt;400&gt; 42

```

ccgcggtggt acggacattg tgatgaccca gtctcaaaaa ttcattgtca catcagtagg      60
agacaggggtc agcgtcacct gcaaggccag tcagaatgtg gataactatg tagcctggta      120
tcaacaaaaa ccagggaat ctctgaacc actgcttttc tcggcatcct accgttacac      180
tggagtccct gatcgcttca caggcagtg atctgggaca gatttcactc tcaccatcag      240
caatgtgcag tctgaagact tggcagagta ttctgtcag caatataaca gctatcctct      300
gacgttcggt ggaggcacca agctggagat caaaggctcc accagcggca gcggtgaagcc      360
aggctccggc gaaggcagca ccaaaggcga agtgaagggt gaggagtctg gaggaggctt      420
ggtgcaacct ggaggatcca tgaactctc ctgtgtgtc tctggattca ctttcggtaa      480
ttactggatg aactgggtcc gccagtctcc agagaagggg cttagagtga ttgcagaaat      540
tagattgaaa tccaataatt ttgcaagata ttatgcggag tctgtgaaag ggaggttcac      600

```

## PCB903024PBT\_PCT.txt

catctcaaga gatgattcca aaagtagtgt ctacctgcaa atgatcaacc taagagctga 660  
 agatactggc atttattact gtaccagtta tggtaactac gttagggcact attttgacca 720  
 ctggggccaa ggcaccactc tcaccgtctc cctttgggga 760

<210> 43  
 <211> 1137  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding UB-scFvMEL-TOM7

<400> 43  
 atgggcagca gccatcatca tcatcatcac agcagcggcc tggtgccg cggcagccat 60  
 atgcaaactc tcgtcaaaac tctaacaggg aagactataa ccctagaggt tgaacatcc 120  
 gacactattg aaaacgtcaa agctaaaatt caagataaag aaggatccc tccggatcag 180  
 cagagattga tttttgctgg taagcaacta gaagatgga gaacctgtc tgactacaac 240  
 atccaaaagg aatctactct tcaattgggt ttgagactcc gcggtgttac ggacattgtg 300  
 atgaccagt ctcaaaaatt catgtccaca tcagtaggag acagggtcag cgtcacctgc 360  
 aaggccagtc agaattgtga tactaatgta gcctggtatc acaaaaacc agggcaatct 420  
 cctgaaccac tgcctttctc ggcacacctc cgttacactg gagtccctga tcgcttcaca 480  
 ggagtggtat ctgggacaga ttctactctc accatcagca atgtgcagtc tgaagacttg 540  
 gcagagtatt tctgtcagca atataacagc tatcctctga cgttcggtgg aggcaccaag 600  
 ctggagatca aaggctccac cagcggcagc ggtaagccag gctccggcga aggcagcacc 660  
 aaaggcgaag tgaagggtga ggagctgga ggaggcttg tgcaacctgg aggatccatg 720  
 aaactctcct gtgtgtctc tggattcact ttcggttaatt actggatgaa ctgggtccgc 780  
 cagtctccag agaaggggct tgagtggatt gcagaaatta gattgaaatc caataatttt 840  
 gcaagatatt atgcggagtc tgtgaaaggg aggttcacca tctcaagaga tgattccaaa 900  
 agtagtgtct acctgcaaat gatcaacctc agagctgaag atactggcat ttattactgt 960  
 accagttatg gtaactacgt tgggcactat tttagaccact ggggccaagg caccactctc 1020  
 accgtctcct catttgccat tcgctggggc ttatccctc ttgtgattta cctgggattt 1080  
 aagaggggtg cagatcccg aatgcctgaa ccaactgttt tgagcctact ttgggga 1137

<210> 44  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> RscFvMEL primer

<400> 44  
 aaaaaagaat tcatgaaaac aagtaacca ggagtg 36

PCB903024PBT\_PCT.txt

<210> 45  
 <211> 939  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding scFvMEL-TOM7-myc/His

<400> 45  
 atgacggaca ttgtgatgac ccagtctcaa aaattcatgt ccacatcagt aggagacagg 60  
 gtcagcgta cctgcaaggc cagtcagaat gtggatacta atgtagcctg gtatcaacaa 120  
 aaaccagggc aatctcctga accactgctt ttctcggcat cctaccgtta cactggagtc 180  
 cctgatcgct tcacaggcag tggatctggg acagatttca ctctcaccat cagcaatgtg 240  
 cagtctgaag acttggcaga gtatttctgt cagcaatata acagctatcc tctgacgttc 300  
 ggtggaggca ccaagctgga gatcaaaggc tccaccagcg gcagcggtaa gccaggctcc 360  
 ggccaaggca gcaccaaagg cgaagtgaag gttgaggagt ctggaggagg ctgggtgcaa 420  
 cctggaggat ccatgaaact ctctgtgtt gtctctggat tcactttcgg taattactgg 480  
 atgaactggg tccgccagtc tccagagaag gggcttgagt ggattgcaga aattagattg 540  
 aaatccaata attttgcaag atattatgcg gagtctgtga aaggagggtt caccatctca 600  
 agagatgatt ccaaaagtag tgtctacctg caaatgatca acctaagagc tgaagatact 660  
 ggcatattat actgtaccag ttatggtaac tacgttgggc actattttga ccaactggggc 720  
 caaggcacca ctctcaccgt ctctcattt gccattcgct ggggctttat ccctcttgtg 780  
 atttacctgg gatttaagag gggtcagat cccggaatgc ctgaaccaac tgttttgagc 840  
 ctactttggg gactcgagtc tagagggcc ttcgaaacaa aactcatctc agaagaggat 900  
 ctgaatatgc ataccggtca tcatcaccat caccattga 939

<210> 46  
 <211> 750  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding scFvPD-L1

<400> 46  
 atggacatcg tgaagagcca gtctcccagc agcctggctg tgtctgctgg ggagaaggta 60  
 accatgtcct gcaagagctc ccagtccttg ctgaacagcc gcaccaggaa gaactacctg 120  
 gccctgtacc agcagaagcc aggccagagc cccaagctcc tcattctactg ggccagcacc 180  
 cgggagagcg ggggtgcctga ccgcttcact ggaagtggca gcggcacaga cttcaccttg 240  
 accatcagct ctgtgcagcg cgaggacctg gcagtgtact actgccagca aagctatgat 300  
 gtggtgacat ttggagctgg caccaagctg gagctgaagg gaggtggcgg aagcgggggt 360  
 ggaggatccg gggggggcgg aagccaggtc cagggtgcagc agagcggggc tgagctggcc 420

PCB903024PBT\_PCT.txt

gagccccggg cctctgtgaa gatgagctgc aaggcttctg gctacatctt caccagctac 480  
 tggatgcact ggctcaagca gaggcctggg caggggctgg agtggatcgg ctatatcaac 540  
 cccagcagtg actacaatga atattctgag aagttcatgg acaaagccac cctgactgct 600  
 gacaaggcca gcaccaccgc ctacatgcag ctgatcagcc tgacctcaga ggacagcgct 660  
 gtgtactact gtgcccgag cggtggctg gtgcacgggg actattatit tgattattgg 720  
 ggccagggca ccacactgac agtgagcagc 750

<210> 47  
 <211> 948  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding scFvPD-L1-TOM7-myc/His

<400> 47  
 atggacatcg tgatgagcca gtctcccagc agcctggctg tgtctgctgg ggagaagggtg 60  
 accatgtcct gcaagagctc ccagtccttg ctgaacagcc gcaccaggaa gaactacctg 120  
 gcctggtacc agcagaagcc aggcagagc cccaagctcc tcatctactg ggccagcacc 180  
 cgggagagcg ggggtcctga ccgcttact ggaagtggca gcggcacaga cttaccctg 240  
 accatcagct ctgtgcagcg cgaggacctg gcagtgtact actgccagca aagctatgat 300  
 gtggtgacat ttggagctgg caccaagctg gagctgaagg gaggtggcgg aagcgggggt 360  
 ggaggatccg gggggcgcg aagccaggtc caggtgcagc agagcggggc tgagctggcc 420  
 gagccccggg cctctgtgaa gatgagctgc aaggcttctg gctacatctt caccagctac 480  
 tggatgcact ggctcaagca gaggcctggg caggggctgg agtggatcgg ctatatcaac 540  
 cccagcagtg actacaatga atattctgag aagttcatgg acaaagccac cctgactgct 600  
 gacaaggcca gcaccaccgc ctacatgcag ctgatcagcc tgacctcaga ggacagcgct 660  
 gtgtactact gtgcccgag cggtggctg gtgcacgggg actattatit tgattattgg 720  
 ggccagggca ccacactgac agtgagcagc ctcgagtttg ccattcgctg gggctttatc 780  
 cctcttgtga ttacctggg atttaagagg ggtgcagatc ccggaatgcc tgaaccaact 840  
 gttttgagcc tactttggg actcgagtct agagggccct tcgaacaaaa actcatctca 900  
 gaagaggatc tgaatatgca taccggtcat catcaccatc accattga 948

<210> 48  
 <211> 395  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of p53

<400> 48  
 Arg Gly Gly Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu  
 1 5 10 15

## PCB903024PBT\_PCT.txt

Ser Gln Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn  
 20 25 30  
 Val Leu Ser Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser  
 35 40 45  
 Pro Asp Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu  
 50 55 60  
 Ala Pro Arg Met Pro Glu Ala Ala Pro Arg Val Ala Pro Ala Pro Ala  
 65 70 75 80  
 Ala Pro Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser  
 85 90 95  
 Ser Ser Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg  
 100 105 110  
 Leu Gly Phe Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr  
 115 120 125  
 Ser Pro Ala Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro  
 130 135 140  
 Val Gln Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg  
 145 150 155 160  
 Ala Met Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg  
 165 170 175  
 Arg Cys Pro His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro  
 180 185 190  
 Pro Gln His Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu  
 195 200 205  
 Asp Asp Arg Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro  
 210 215 220  
 Pro Glu Val Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys  
 225 230 235 240  
 Asn Ser Ser Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile  
 245 250 255  
 Ile Thr Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe  
 260 265 270  
 Glu Val Arg Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu  
 275 280 285  
 Glu Asn Leu Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly  
 290 295 300  
 Ser Thr Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro  
 305 310 315 320  
 Lys Lys Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly  
 325 330 335  
 Arg Glu Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu  
 340 345 350  
 Lys Asp Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser  
 355 360 365  
 Ser His Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys  
 22 페이지

PCB903024PBT\_PCT.txt

370

375

380

Leu Met Phe Lys Thr Glu Gly Pro Asp Ser Asp  
 385 390 395

<210> 49  
 <211> 488  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of UB-p53

<400> 49  
 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro  
 1 5 10 15  
 Arg Gly Ser His Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr  
 20 25 30  
 Ile Thr Leu Glu Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala  
 35 40 45  
 Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile  
 50 55 60  
 Phe Ala Gly Lys Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn  
 65 70 75 80  
 Ile Gln Lys Glu Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly  
 85 90 95  
 Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln Glu  
 100 105 110  
 Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu Ser  
 115 120 125  
 Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp Asp  
 130 135 140  
 Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro Arg  
 145 150 155 160  
 Met Pro Glu Ala Ala Pro Arg Val Ala Pro Ala Pro Ala Ala Pro Thr  
 165 170 175  
 Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser Val  
 180 185 190  
 Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly Phe  
 195 200 205  
 Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro Ala  
 210 215 220  
 Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln Leu  
 225 230 235 240  
 Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met Ala  
 245 250 255  
 Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys Pro  
 260 265 270  
 His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln His  
 23 페이지

PCB903024PBT\_PCT.txt  
285

275                      280  
 Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp Arg  
 290                      295                      300  
 Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu Val  
 305                      310                      315                      320  
 Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser Ser  
 325                      330                      335  
 Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu  
 340                      345                      350  
 Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val Arg  
 355                      360                      365  
 Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn Leu  
 370                      375                      380  
 Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr Lys  
 385                      390                      395                      400  
 Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys Lys  
 405                      410                      415  
 Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu Arg  
 420                      425                      430  
 Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp Ala  
 435                      440                      445  
 Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His Leu  
 450                      455                      460  
 Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met Phe  
 465                      470                      475                      480  
 Lys Thr Glu Gly Pro Asp Ser Asp  
 485

<210> 50  
 <211> 504  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of TOM70-UB-p53

<400> 50  
 Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Phe Ala Thr Val  
 1                      5                      10                      15  
 Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Gln Ile Phe  
 20                      25                      30  
 Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser  
 35                      40                      45  
 Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile  
 50                      55                      60  
 Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp  
 65                      70                      75                      80  
 Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His  
 24 페이지

PCB903024PBT\_PCT.txt

85

90

95

Leu Val Leu Arg Leu Arg Gly Gly Glu Glu Pro Gln Ser Asp Pro Ser  
 100 105 110  
 Val Glu Pro Pro Leu Ser Gln Glu Thr Phe Ser Asp Leu Trp Lys Leu  
 115 120 125  
 Leu Pro Glu Asn Asn Val Leu Ser Pro Leu Pro Ser Gln Ala Met Asp  
 130 135 140  
 Asp Leu Met Leu Ser Pro Asp Asp Ile Glu Gln Trp Phe Thr Glu Asp  
 145 150 155 160  
 Pro Gly Pro Asp Glu Ala Pro Arg Met Pro Glu Ala Ala Pro Arg Val  
 165 170 175  
 Ala Pro Ala Pro Ala Ala Pro Thr Pro Ala Ala Pro Ala Pro Ala Pro  
 180 185 190  
 Ser Trp Pro Leu Ser Ser Ser Val Pro Ser Gln Lys Thr Tyr Gln Gly  
 195 200 205  
 Ser Tyr Gly Phe Arg Leu Gly Phe Leu His Ser Gly Thr Ala Lys Ser  
 210 215 220  
 Val Thr Cys Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe Cys Gln Leu  
 225 230 235 240  
 Ala Lys Thr Cys Pro Val Gln Leu Trp Val Asp Ser Thr Pro Pro Pro  
 245 250 255  
 Gly Thr Arg Val Arg Ala Met Ala Ile Tyr Lys Gln Ser Gln His Met  
 260 265 270  
 Thr Glu Val Val Arg Arg Cys Pro His His Glu Arg Cys Ser Asp Ser  
 275 280 285  
 Asp Gly Leu Ala Pro Pro Gln His Leu Ile Arg Val Glu Gly Asn Leu  
 290 295 300  
 Arg Val Glu Tyr Leu Asp Asp Arg Asn Thr Phe Arg His Ser Val Val  
 305 310 315 320  
 Val Pro Tyr Glu Pro Pro Glu Val Gly Ser Asp Cys Thr Thr Ile His  
 325 330 335  
 Tyr Asn Tyr Met Cys Asn Ser Ser Cys Met Gly Gly Met Asn Arg Arg  
 340 345 350  
 Pro Ile Leu Thr Ile Ile Thr Leu Glu Asp Ser Ser Gly Asn Leu Leu  
 355 360 365  
 Gly Arg Asn Ser Phe Glu Val Arg Val Cys Ala Cys Pro Gly Arg Asp  
 370 375 380  
 Arg Arg Thr Glu Glu Glu Asn Leu Arg Lys Lys Gly Glu Pro His His  
 385 390 395 400  
 Glu Leu Pro Pro Gly Ser Thr Lys Arg Ala Leu Pro Asn Asn Thr Ser  
 405 410 415  
 Ser Ser Pro Gln Pro Lys Lys Lys Pro Leu Asp Gly Glu Tyr Phe Thr  
 420 425 430  
 Leu Gln Ile Arg Gly Arg Glu Arg Phe Glu Met Phe Arg Glu Leu Asn  
 435 440 445

PCB903024PBT\_PCT.txt

Glu Ala Leu Glu Leu Lys Asp Ala Gln Ala Gly Lys Glu Pro Gly Gly  
 450 455 460

Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly Gln Ser Thr  
 465 470 475 480

Ser Arg His Lys Lys Leu Met Phe Lys Thr Glu Gly Pro Asp Ser Asp  
 485 490 495

Leu Glu His His His His His  
 500

<210> 51  
 <211> 519  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of TOM70-(GGGS)3-UB-p53

<400> 51  
 Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Phe Ala Thr Val  
 1 5 10 15  
 Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Gly Gly Gly  
 20 25 30  
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Phe Val  
 35 40 45  
 Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp  
 50 55 60  
 Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro  
 65 70 75 80  
 Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp Gly  
 85 90 95  
 Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His Leu  
 100 105 110  
 Val Leu Arg Leu Arg Gly Gly Glu Glu Pro Gln Ser Asp Pro Ser Val  
 115 120 125  
 Glu Pro Pro Leu Ser Gln Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu  
 130 135 140  
 Pro Glu Asn Asn Val Leu Ser Pro Leu Pro Ser Gln Ala Met Asp Asp  
 145 150 155 160  
 Leu Met Leu Ser Pro Asp Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro  
 165 170 175  
 Gly Pro Asp Glu Ala Pro Arg Met Pro Glu Ala Ala Pro Arg Val Ala  
 180 185 190  
 Pro Ala Pro Ala Ala Pro Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser  
 195 200 205  
 Trp Pro Leu Ser Ser Ser Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser  
 210 215 220  
 Tyr Gly Phe Arg Leu Gly Phe Leu His Ser Gly Thr Ala Lys Ser Val  
 225 230 235 240

PCB903024PBT\_PCT.txt

Thr Cys Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe Cys Gln Leu Ala  
 245 250 255  
 Lys Thr Cys Pro Val Gln Leu Trp Val Asp Ser Thr Pro Pro Pro Gly  
 260 265 270  
 Thr Arg Val Arg Ala Met Ala Ile Tyr Lys Gln Ser Gln His Met Thr  
 275 280 285  
 Glu Val Val Arg Arg Cys Pro His His Glu Arg Cys Ser Asp Ser Asp  
 290 295 300  
 Gly Leu Ala Pro Pro Gln His Leu Ile Arg Val Glu Gly Asn Leu Arg  
 305 310 315 320  
 Val Glu Tyr Leu Asp Asp Arg Asn Thr Phe Arg His Ser Val Val Val  
 325 330 335  
 Pro Tyr Glu Pro Pro Glu Val Gly Ser Asp Cys Thr Thr Ile His Tyr  
 340 345 350  
 Asn Tyr Met Cys Asn Ser Ser Cys Met Gly Gly Met Asn Arg Arg Pro  
 355 360 365  
 Ile Leu Thr Ile Ile Thr Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly  
 370 375 380  
 Arg Asn Ser Phe Glu Val Arg Val Cys Ala Cys Pro Gly Arg Asp Arg  
 385 390 395 400  
 Arg Thr Glu Glu Glu Asn Leu Arg Lys Lys Gly Glu Pro His His Glu  
 405 410 415  
 Leu Pro Pro Gly Ser Thr Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser  
 420 425 430  
 Ser Pro Gln Pro Lys Lys Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu  
 435 440 445  
 Gln Ile Arg Gly Arg Glu Arg Phe Glu Met Phe Arg Glu Leu Asn Glu  
 450 455 460  
 Ala Leu Glu Leu Lys Asp Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser  
 465 470 475 480  
 Arg Ala His Ser Ser His Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser  
 485 490 495  
 Arg His Lys Lys Leu Met Phe Lys Thr Glu Gly Pro Asp Ser Asp Leu  
 500 505 510  
 Glu His His His His His  
 515

<210> 52  
 <211> 444  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of TOM70-(GGGS)3-p53

<400> 52  
 Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Phe Ala Thr Val  
 1 5 10 15

PCB903024PBT\_PCT.txt

Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Gly Gly Gly  
 20 25 30  
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Glu Glu Pro Gln  
 35 40 45  
 Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln Glu Thr Phe Ser Asp  
 50 55 60  
 Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu Pro Ser  
 65 70 75 80  
 Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp Asp Ile Glu Gln Trp  
 85 90 95  
 Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro Arg Met Pro Glu Ala  
 100 105 110  
 Ala Pro Arg Val Ala Pro Ala Pro Ala Ala Pro Thr Pro Ala Ala Pro  
 115 120 125  
 Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser Val Pro Ser Gln Lys  
 130 135 140  
 Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly Phe Leu His Ser Gly  
 145 150 155 160  
 Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro Ala Leu Asn Lys Met  
 165 170 175  
 Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln Leu Trp Val Asp Ser  
 180 185 190  
 Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met Ala Ile Tyr Lys Gln  
 195 200 205  
 Ser Gln His Met Thr Glu Val Val Arg Arg Cys Pro His His Glu Arg  
 210 215 220  
 Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln His Leu Ile Arg Val  
 225 230 235 240  
 Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp Arg Asn Thr Phe Arg  
 245 250 255  
 His Ser Val Val Val Pro Tyr Glu Pro Pro Glu Val Gly Ser Asp Cys  
 260 265 270  
 Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser Ser Cys Met Gly Gly  
 275 280 285  
 Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu Glu Asp Ser Ser  
 290 295 300  
 Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val Arg Val Cys Ala Cys  
 305 310 315 320  
 Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn Leu Arg Lys Lys Gly  
 325 330 335  
 Glu Pro His His Glu Leu Pro Pro Gly Ser Thr Lys Arg Ala Leu Pro  
 340 345 350  
 Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys Lys Pro Leu Asp Gly  
 355 360 365  
 Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu Arg Phe Glu Met Phe  
 370 375 380

PCB903024PBT\_PCT.txt

Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp Ala Gln Ala Gly Lys  
385 390 395 400

Glu Pro Gly Gly Ser Arg Ala His Ser Ser His Leu Lys Ser Lys Lys  
405 410 415

Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met Phe Lys Thr Glu Gly  
420 425 430

Pro Asp Ser Asp Leu Glu His His His His His  
435 440

<210> 53  
<211> 525  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> amino acid sequence of UB-p53-TOM7

<400> 53  
Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro  
1 5 10 15

Arg Gly Ser His Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr  
20 25 30

Ile Thr Leu Glu Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala  
35 40 45

Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile  
50 55 60

Phe Ala Gly Lys Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn  
65 70 75 80

Ile Gln Lys Glu Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly  
85 90 95

Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln Glu  
100 105 110

Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu Ser  
115 120 125

Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp Asp  
130 135 140

Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro Arg  
145 150 155 160

Met Pro Glu Ala Ala Pro Arg Val Ala Pro Ala Pro Ala Ala Pro Thr  
165 170 175

Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Val  
180 185 190

Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly Phe  
195 200 205

Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro Ala  
210 215 220

Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln Leu  
225 230 235 240

PCB903024PBT\_PCT.txt

Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met Ala  
 245 250 255  
 Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys Pro  
 260 265 270  
 His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln His  
 275 280 285  
 Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp Arg  
 290 295 300  
 Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu Val  
 305 310 315 320  
 Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser Ser  
 325 330 335  
 Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu  
 340 345 350  
 Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val His  
 355 360 365  
 Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn Leu  
 370 375 380  
 Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr Lys  
 385 390 395 400  
 Arg Ala Leu Ser Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys Lys  
 405 410 415  
 Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu Arg  
 420 425 430  
 Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp Ala  
 435 440 445  
 Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His Leu  
 450 455 460  
 Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met Phe  
 465 470 475 480  
 Lys Thr Glu Gly Pro Asp Ser Asp Leu Glu Phe Ala Ile Arg Trp Gly  
 485 490 495  
 Phe Ile Pro Leu Val Ile Tyr Leu Gly Phe Lys Arg Gly Ala Asp Pro  
 500 505 510  
 Gly Met Pro Glu Pro Thr Val Leu Ser Leu Leu Trp Gly  
 515 520 525

<210> 54  
 <211> 421  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of p53-myc/His

<400> 54  
 Met Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln  
 1 5 10 15

PCB903024PBT\_PCT.txt

Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu  
 20 25 30  
 Ser Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp  
 35 40 45  
 Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro  
 50 55 60  
 Arg Met Pro Glu Ala Ala Pro Arg Val Ala Pro Ala Ala Ala Pro  
 65 70 75 80  
 Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser  
 85 90 95  
 Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly  
 100 105 110  
 Phe Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro  
 115 120 125  
 Ala Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln  
 130 135 140  
 Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met  
 145 150 155 160  
 Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys  
 165 170 175  
 Pro His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln  
 180 185 190  
 His Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp  
 195 200 205  
 Arg Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu  
 210 215 220  
 Val Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser  
 225 230 235 240  
 Ser Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr  
 245 250 255  
 Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val  
 260 265 270  
 Arg Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn  
 275 280 285  
 Leu Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr  
 290 295 300  
 Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys  
 305 310 315 320  
 Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu  
 325 330 335  
 Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp  
 340 345 350  
 Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His  
 355 360 365  
 Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met  
 31 페이지

PCB903024PBT\_PCT.txt

370

375

380

Phe Lys Thr Glu Gly Pro Asp Ser Asp Leu Glu Ser Arg Gly Pro Phe  
 385 390 395 400

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn Met His Thr Gly His  
 405 410 415

His His His His His  
 420

&lt;210&gt; 55

&lt;211&gt; 230

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; amino acid sequence of GranzymeB

&lt;400&gt; 55

Arg Gly Gly Ile Ile Gly Gly His Glu Ala Lys Pro His Ser Arg Pro  
 1 5 10 15

Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu Lys Arg Cys  
 20 25 30

Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr Ala Ala His Cys  
 35 40 45

Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn Ile Lys Glu  
 50 55 60

Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg Pro Ile Pro His  
 65 70 75 80

Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met Leu Leu Gln  
 85 90 95

Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln Pro Leu Arg Leu  
 100 105 110

Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr Cys Ser Val Ala  
 115 120 125

Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser His Thr Leu Gln  
 130 135 140

Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys Glu Ser Asp Leu  
 145 150 155 160

Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly Asp Pro Glu  
 165 170 175

Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro Leu Val Cys  
 180 185 190

Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn Asn Gly Met  
 195 200 205

Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val His Trp Ile Lys  
 210 215 220

Lys Thr Met Lys Arg Tyr  
 225 230

PCB903024PBT\_PCT.txt

<210> 56  
 <211> 354  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of TOM70-(GGGS)3-UB-Granzyme B

<400> 56  
 Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Phe Ala Thr Val  
 1 5 10 15  
 Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Gly Gly Gly  
 20 25 30  
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Phe Val  
 35 40 45  
 Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp  
 50 55 60  
 Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro  
 65 70 75 80  
 Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp Gly  
 85 90 95  
 Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His Leu  
 100 105 110  
 Val Leu Arg Leu Arg Gly Gly Ile Ile Gly Gly His Glu Ala Lys Pro  
 115 120 125  
 His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser  
 130 135 140  
 Leu Lys Arg Cys Gly Gly Phe Leu Ile Arg Asp Asp Phe Val Leu Thr  
 145 150 155 160  
 Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His  
 165 170 175  
 Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg  
 180 185 190  
 Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile  
 195 200 205  
 Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln  
 210 215 220  
 Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr  
 225 230 235 240  
 Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser  
 245 250 255  
 His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys  
 260 265 270  
 Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val  
 275 280 285  
 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly  
 290 295 300  
 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg  
 33 페이지

PCB903024PBT\_PCT.txt

305 310 315 320

Asn Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val  
325 330 335His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Glu His His His His  
340 345 350

His His

<210> 57  
 <211> 360  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of UB-Granzyme B-TOM7

<400> 57  
 Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro  
 1 5 10 15

Arg Gly Ser His Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr  
 20 25 30

Ile Thr Leu Glu Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala  
 35 40 45

Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile  
 50 55 60

Phe Ala Gly Lys Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn  
 65 70 75 80

Ile Gln Lys Glu Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly  
 85 90 95

Ile Ile Gly Gly His Glu Ala Lys Pro His Ser Arg Pro Tyr Met Ala  
 100 105 110

Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu Lys Arg Cys Gly Gly Phe  
 115 120 125

Leu Ile Arg Asp Asp Phe Val Leu Thr Ala Ala His Cys Trp Gly Ser  
 130 135 140

Ser Ile Asn Val Thr Leu Gly Ala His Asn Ile Lys Glu Gln Glu Pro  
 145 150 155 160

Thr Gln Gln Phe Ile Pro Val Lys Arg Pro Ile Pro His Pro Ala Tyr  
 165 170 175

Asn Pro Lys Asn Phe Ser Asn Asp Ile Met Leu Leu Gln Leu Glu Arg  
 180 185 190

Lys Ala Lys Arg Thr Arg Ala Val Gln Pro Leu Arg Leu Pro Ser Asn  
 195 200 205

Lys Ala Gln Val Lys Pro Gly Gln Thr Cys Ser Val Ala Gly Trp Gly  
 210 215 220

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

Met Thr Val Gln Glu Asp Arg Lys Cys Glu Ser Asp Leu Arg His Tyr  
 34 페이지

PCB903024PBT\_PCT.txt

245

250

255

Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly Asp Pro Glu Ile Lys Lys  
 260 265 270

Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro Leu Val Cys Asn Lys Val  
 275 280 285

Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn Asn Gly Met Pro Pro Arg  
 290 295 300

Ala Cys Thr Lys Val Ser Ser Phe Val His Trp Ile Lys Lys Thr Met  
 305 310 315 320

Lys Arg Tyr Leu Glu Phe Ala Ile Arg Trp Gly Phe Ile Pro Leu Val  
 325 330 335

Ile Tyr Leu Gly Phe Lys Arg Gly Ala Asp Pro Gly Met Pro Glu Pro  
 340 345 350

Thr Val Leu Ser Leu Leu Trp Gly  
 355 360

&lt;210&gt; 58

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; amino acid sequence of RKIP

&lt;400&gt; 58

Arg Gly Gly Pro Val Asp Leu Ser Lys Trp Ser Gly Pro Leu Ser Leu  
 1 5 10 15

Gln Glu Val Asp Glu Gln Pro Gln His Pro Leu His Val Thr Tyr Ala  
 20 25 30

Gly Ala Ala Val Asp Glu Leu Gly Lys Val Leu Thr Pro Thr Gln Val  
 35 40 45

Lys Asn Arg Pro Thr Ser Ile Ser Trp Asp Gly Leu Asp Ser Gly Lys  
 50 55 60

Leu Tyr Thr Leu Val Leu Thr Asp Pro Asp Ala Pro Ser Arg Lys Asp  
 65 70 75 80

Pro Lys Tyr Arg Glu Trp His His Phe Leu Val Val Asn Met Lys Gly  
 85 90 95

Asn Asp Ile Ser Ser Gly Thr Val Leu Ser Asp Tyr Val Gly Ser Gly  
 100 105 110

Pro Pro Lys Gly Thr Gly Leu His Arg Tyr Val Trp Leu Val Tyr Glu  
 115 120 125

Gln Asp Arg Pro Leu Lys Cys Asp Glu Pro Ile Leu Ser Asn Arg Ser  
 130 135 140

Gly Asp His Arg Gly Lys Phe Lys Val Ala Ser Phe Arg Lys Lys Tyr  
 145 150 155 160

Glu Leu Arg Ala Pro Val Ala Gly Thr Cys Tyr Gln Ala Glu Trp Asp  
 165 170 175

Asp Tyr Val Pro Lys Leu Tyr Glu Gln Leu Ser Gly Lys  
 35 페이지

PCB903024PBT\_PCT.txt

180

185

<210> 59  
 <211> 313  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of TOM70-(GGGGS)3-UB-RKIP

<400> 59  
 Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Phe Ala Thr Val  
 1 5 10 15  
 Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Gly Gly Gly  
 20 25 30  
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Phe Val  
 35 40 45  
 Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp  
 50 55 60  
 Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro  
 65 70 75 80  
 Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp Gly  
 85 90 95  
 Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His Leu  
 100 105 110  
 Val Leu Arg Leu Arg Gly Gly Pro Val Asp Leu Ser Lys Trp Ser Gly  
 115 120 125  
 Pro Leu Ser Leu Gln Glu Val Asp Glu Gln Pro Gln His Pro Leu His  
 130 135 140  
 Val Thr Tyr Ala Gly Ala Ala Val Asp Glu Leu Gly Lys Val Leu Thr  
 145 150 155 160  
 Pro Thr Gln Val Lys Asn Arg Pro Thr Ser Ile Ser Trp Asp Gly Leu  
 165 170 175  
 Asp Ser Gly Lys Leu Tyr Thr Leu Val Leu Thr Asp Pro Asp Ala Pro  
 180 185 190  
 Ser Arg Lys Asp Pro Lys Tyr Arg Glu Trp His His Phe Leu Val Val  
 195 200 205  
 Asn Met Lys Gly Asn Asp Ile Ser Ser Gly Thr Val Leu Ser Asp Tyr  
 210 215 220  
 Val Gly Ser Gly Pro Pro Lys Gly Thr Gly Leu His Arg Tyr Val Trp  
 225 230 235 240  
 Leu Val Tyr Glu Gln Asp Arg Pro Leu Lys Cys Asp Glu Pro Ile Leu  
 245 250 255  
 Ser Asn Arg Ser Gly Asp His Arg Gly Lys Phe Lys Val Ala Ser Phe  
 260 265 270  
 Arg Lys Lys Tyr Glu Leu Arg Ala Pro Val Ala Gly Thr Cys Tyr Gln  
 275 280 285  
 Ala Glu Trp Asp Asp Tyr Val Pro Lys Leu Tyr Glu Gln Leu Ser Gly  
 36 페이지

PCB903024PBT\_PCT.txt  
300

290

295

Lys Leu Glu His His His His His His  
305 310

<210> 60  
 <211> 405  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of PTEN

<400> 60  
 Arg Gly Gly Thr Ala Ile Ile Lys Glu Ile Val Ser Arg Asn Lys Arg  
 1 5 10 15  
 Arg Tyr Gln Glu Asp Gly Phe Asp Leu Asp Leu Thr Tyr Ile Tyr Pro  
 20 25 30  
 Asn Ile Ile Ala Met Gly Phe Pro Ala Glu Arg Leu Glu Gly Val Tyr  
 35 40 45  
 Arg Asn Asn Ile Asp Asp Val Val Arg Phe Leu Asp Ser Lys His Lys  
 50 55 60  
 Asn His Tyr Lys Ile Tyr Asn Leu Cys Ala Glu Arg His Tyr Asp Thr  
 65 70 75 80  
 Ala Lys Phe Asn Cys Arg Val Ala Gln Tyr Pro Phe Glu Asp His Asn  
 85 90 95  
 Pro Pro Gln Leu Glu Leu Ile Lys Pro Phe Cys Glu Asp Leu Asp Gln  
 100 105 110  
 Trp Leu Ser Glu Asp Asp Asn His Val Ala Ala Ile His Cys Lys Ala  
 115 120 125  
 Gly Lys Gly Arg Thr Gly Val Met Ile Cys Ala Tyr Leu Leu His Arg  
 130 135 140  
 Gly Lys Phe Leu Lys Ala Gln Glu Ala Leu Asp Phe Tyr Gly Glu Val  
 145 150 155 160  
 Arg Thr Arg Asp Lys Lys Gly Val Thr Ile Pro Ser Gln Arg Arg Tyr  
 165 170 175  
 Val Tyr Tyr Tyr Ser Tyr Leu Leu Lys Asn His Leu Asp Tyr Arg Pro  
 180 185 190  
 Val Ala Leu Leu Phe His Lys Met Met Phe Glu Thr Ile Pro Met Phe  
 195 200 205  
 Ser Gly Gly Thr Cys Asn Pro Gln Phe Val Val Cys Gln Leu Lys Val  
 210 215 220  
 Lys Ile Tyr Ser Ser Asn Ser Gly Pro Thr Arg Arg Glu Asp Lys Phe  
 225 230 235 240  
 Met Tyr Phe Glu Phe Pro Gln Pro Leu Pro Val Cys Gly Asp Ile Lys  
 245 250 255  
 Val Glu Phe Phe His Lys Gln Asn Lys Met Leu Lys Lys Asp Lys Met  
 260 265 270  
 Phe His Phe Trp Val Asn Thr Phe Phe Ile Pro Gly Pro Glu Glu Thr  
 37 페이지

PCB903024PBT\_PCT.txt

275                      280                      285  
 Ser Glu Lys Val Glu Asn Gly Ser Leu Cys Asp Gln Glu Ile Asp Ser  
 290                      295                      300  
 Ile Cys Ser Ile Glu Arg Ala Asp Asn Asp Lys Glu Tyr Leu Val Leu  
 305                      310                      315                      320  
 Thr Leu Thr Lys Asn Asp Leu Asp Lys Ala Asn Lys Asp Lys Ala Asn  
 325                      330                      335  
 Arg Tyr Phe Ser Pro Asn Phe Lys Val Lys Leu Tyr Phe Thr Lys Thr  
 340                      345                      350  
 Val Glu Glu Pro Ser Asn Pro Glu Ala Ser Ser Ser Thr Ser Val Thr  
 355                      360                      365  
 Pro Asp Val Ser Asp Asn Glu Pro Asp His Tyr Arg Tyr Ser Asp Thr  
 370                      375                      380  
 Thr Asp Ser Asp Pro Glu Asn Glu Pro Phe Asp Glu Asp Gln His Thr  
 385                      390                      395                      400  
 Gln Ile Thr Lys Val  
 405

<210> 61  
 <211> 529  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of TOM70-(GGGS)3-UB-PTEN

<400> 61  
 Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Phe Ala Thr Val  
 1                      5                      10                      15  
 Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Gly Gly Gly  
 20                      25                      30  
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Phe Val  
 35                      40                      45  
 Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp  
 50                      55                      60  
 Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu Gly Ile Pro  
 65                      70                      75                      80  
 Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu Glu Asp Gly  
 85                      90                      95  
 Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser Thr Leu His Leu  
 100                      105                      110  
 Val Leu Arg Leu Arg Gly Gly Thr Ala Ile Ile Lys Glu Ile Val Ser  
 115                      120                      125  
 Arg Asn Lys Arg Arg Tyr Gln Glu Asp Gly Phe Asp Leu Asp Leu Thr  
 130                      135                      140  
 Tyr Ile Tyr Pro Asn Ile Ile Ala Met Gly Phe Pro Ala Glu Arg Leu  
 145                      150                      155                      160  
 Glu Gly Val Tyr Arg Asn Asn Ile Asp Asp Val Val Arg Phe Leu Asp  
 38 페이지

PCB903024PBT\_PCT.txt

165

170

175

Ser Lys His Lys Asn His Tyr Lys Ile Tyr Asn Leu Cys Ala Glu Arg  
 180 185 190  
 His Tyr Asp Thr Ala Lys Phe Asn Cys Arg Val Ala Gln Tyr Pro Phe  
 195 200 205  
 Glu Asp His Asn Pro Pro Gln Leu Glu Leu Ile Lys Pro Phe Cys Glu  
 210 215 220  
 Asp Leu Asp Gln Trp Leu Ser Glu Asp Asp Asn His Val Ala Ala Ile  
 225 230 235 240  
 His Cys Lys Ala Gly Lys Gly Arg Thr Gly Val Met Ile Cys Ala Tyr  
 245 250 255  
 Leu Leu His Arg Gly Lys Phe Leu Lys Ala Gln Glu Ala Leu Asp Phe  
 260 265 270  
 Tyr Gly Glu Val Arg Thr Arg Asp Lys Lys Gly Val Thr Ile Pro Ser  
 275 280 285  
 Gln Arg Arg Tyr Val Tyr Tyr Tyr Ser Tyr Leu Leu Lys Asn His Leu  
 290 295 300  
 Asp Tyr Arg Pro Val Ala Leu Leu Phe His Lys Met Met Phe Glu Thr  
 305 310 315 320  
 Ile Pro Met Phe Ser Gly Gly Thr Cys Asn Pro Gln Phe Val Val Cys  
 325 330 335  
 Gln Leu Lys Val Lys Ile Tyr Ser Ser Asn Ser Gly Pro Thr Arg Arg  
 340 345 350  
 Glu Asp Lys Phe Met Tyr Phe Glu Phe Pro Gln Pro Leu Pro Val Cys  
 355 360 365  
 Gly Asp Ile Lys Val Glu Phe Phe His Lys Gln Asn Lys Met Leu Lys  
 370 375 380  
 Lys Asp Lys Met Phe His Phe Trp Val Asn Thr Phe Phe Ile Pro Gly  
 385 390 395 400  
 Pro Glu Glu Thr Ser Glu Lys Val Glu Asn Gly Ser Leu Cys Asp Gln  
 405 410 415  
 Glu Ile Asp Ser Ile Cys Ser Ile Glu Arg Ala Asp Asn Asp Lys Glu  
 420 425 430  
 Tyr Leu Val Leu Thr Leu Thr Lys Asn Asp Leu Asp Lys Ala Asn Lys  
 435 440 445  
 Asp Lys Ala Asn Arg Tyr Phe Ser Pro Asn Phe Lys Val Lys Leu Tyr  
 450 455 460  
 Phe Thr Lys Thr Val Glu Glu Pro Ser Asn Pro Glu Ala Ser Ser Ser  
 465 470 475 480  
 Thr Ser Val Thr Pro Asp Val Ser Asp Asn Glu Pro Asp His Tyr Arg  
 485 490 495  
 Tyr Ser Asp Thr Thr Asp Ser Asp Pro Glu Asn Glu Pro Phe Asp Glu  
 500 505 510  
 Asp Gln His Thr Gln Ile Thr Lys Val Leu Glu His His His His His  
 515 520 525

PCB903024PBT\_PCT.txt

His

<210> 62  
 <211> 246  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> amino acid sequence of scFvHER2

<400> 62  
 Arg Gly Gly Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln  
 1 5 10 15  
 Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe  
 20 25 30  
 Thr Asp Tyr Thr Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu  
 35 40 45  
 Glu Trp Val Ala Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr Asn  
 50 55 60  
 Gln Arg Phe Lys Gly Arg Phe Thr Leu Ser Val Asp Arg Ser Lys Asn  
 65 70 75 80  
 Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val  
 85 90 95  
 Tyr Tyr Cys Ala Arg Asn Leu Gly Pro Ser Phe Tyr Phe Asp Tyr Trp  
 100 105 110  
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly  
 115 120 125  
 Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser  
 130 135 140  
 Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys  
 145 150 155 160  
 Lys Ala Ser Gln Asp Val Ser Ile Gly Val Ala Trp Tyr Gln Gln Lys  
 165 170 175  
 Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr  
 180 185 190  
 Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe  
 195 200 205  
 Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr  
 210 215 220  
 Cys Gln Gln Tyr Tyr Ile Tyr Pro Tyr Thr Phe Gly Gln Gly Thr Lys  
 225 230 235 240  
 Val Glu Ile Lys Arg Thr  
 245

<210> 63  
 <211> 374  
 <212> PRT  
 <213> Artificial Sequence

PCB903024PBT\_PCT.txt

&lt;220&gt;

&lt;223&gt; amino acid sequence of UB-scFvHER2-TOM7

&lt;400&gt; 63

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Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro
 1          5          10          15
Arg Gly Ser His Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr
          20          25          30
Ile Thr Leu Glu Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala
          35          40          45
Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile
          50          55          60
Phe Ala Gly Lys Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn
 65          70          75          80
Ile Gln Lys Glu Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly
          85          90          95
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
          100          105          110
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asp Tyr
          115          120          125
Thr Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
          130          135          140
Ala Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr Asn Gln Arg Phe
          145          150          155          160
Lys Gly Arg Phe Thr Leu Ser Val Asp Arg Ser Lys Asn Thr Leu Tyr
          165          170          175
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
          180          185          190
Ala Arg Asn Leu Gly Pro Ser Phe Tyr Phe Asp Tyr Trp Gly Gln Gly
          195          200          205
Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
          210          215          220
Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
          225          230          235          240
Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser
          245          250          255
Gln Asp Val Ser Ile Gly Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys
          260          265          270
Ala Pro Lys Leu Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Thr Gly Val
          275          280          285
Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
          290          295          300
Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
          305          310          315          320
Tyr Tyr Ile Tyr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
          325          330          335

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PCB903024PBT\_PCT.txt

Lys Arg Thr Phe Ala Ile Arg Trp Gly Phe Ile Pro Leu Val Ile Tyr  
 340 345 350

Leu Gly Phe Lys Arg Gly Ala Asp Pro Gly Met Pro Glu Pro Thr Val  
 355 360 365

Leu Ser Leu Leu Trp Gly  
 370

<210> 64

<211> 307

<212> PRT

<213> Artificial Sequence

<220>

<223> amino acid sequence of scFvHER2-TOM7-myc/His

<400> 64

Met Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly  
 1 5 10 15

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asp  
 20 25 30

Tyr Thr Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp  
 35 40 45

Val Ala Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr Asn Gln Arg  
 50 55 60

Phe Lys Gly Arg Phe Thr Leu Ser Val Asp Arg Ser Lys Asn Thr Leu  
 65 70 75 80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr  
 85 90 95

Cys Ala Arg Asn Leu Gly Pro Ser Phe Tyr Phe Asp Tyr Trp Gly Gln  
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly  
 115 120 125

Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser  
 130 135 140

Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala  
 145 150 155 160

Ser Gln Asp Val Ser Ile Gly Val Ala Trp Tyr Gln Gln Lys Pro Gly  
 165 170 175

Lys Ala Pro Lys Leu Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Thr Gly  
 180 185 190

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu  
 195 200 205

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln  
 210 215 220

Gln Tyr Tyr Ile Tyr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu  
 225 230 235 240

Ile Lys Arg Thr Phe Ala Ile Arg Trp Gly Phe Ile Pro Leu Val Ile  
 245 250 255

PCB903024PBT\_PCT.txt

Tyr Leu Gly Phe Lys Arg Gly Ala Asp Pro Gly Met Pro Glu Pro Thr  
 260 265 270

Val Leu Ser Leu Leu Trp Gly Leu Glu Ser Arg Gly Pro Phe Glu Gln  
 275 280 285

Lys Leu Ile Ser Glu Glu Asp Leu Asn Met His Thr Gly His His His  
 290 295 300

His His His  
 305

<210> 65

<211> 251

<212> PRT

<213> Artificial Sequence

<220>

<223> amino acid sequence of scFvMEL

<400> 65

Arg Gly Gly Thr Asp Ile Val Met Thr Gln Ser Gln Lys Phe Met Ser  
 1 5 10 15

Thr Ser Val Gly Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn  
 20 25 30

Val Asp Thr Asn Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro  
 35 40 45

Glu Pro Leu Leu Phe Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Asp  
 50 55 60

Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser  
 65 70 75 80

Asn Val Gln Ser Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Asn  
 85 90 95

Ser Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly  
 100 105 110

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

Gly Glu Val Lys Val Glu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly  
 130 135 140

Gly Ser Met Lys Leu Ser Cys Val Val Ser Gly Phe Thr Phe Gly Asn  
 145 150 155 160

Tyr Trp Met Asn Trp Val Arg Gln Ser Pro Glu Lys Gly Leu Glu Trp  
 165 170 175

Ile Ala Glu Ile Arg Leu Lys Ser Asn Asn Phe Ala Arg Tyr Tyr Ala  
 180 185 190

Glu Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Ser  
 195 200 205

Ser Val Tyr Leu Gln Met Ile Asn Leu Arg Ala Glu Asp Thr Gly Ile  
 210 215 220

Tyr Tyr Cys Thr Ser Tyr Gly Asn Tyr Val Gly His Tyr Phe Asp His  
 225 230 235 240

PCB903024PBT\_PCT.txt

Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser  
245 250

<210> 66  
<211> 378  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> amino acid sequence of UB-scFvMEL-TOM7

<400> 66  
Met Gly Ser Ser His His His His His Ser Ser Gly Leu Val Pro  
1 5 10 15  
Arg Gly Ser His Met Gln Ile Phe Val Lys Thr Leu Thr Gly Lys Thr  
20 25 30  
Ile Thr Leu Glu Val Glu Pro Ser Asp Thr Ile Glu Asn Val Lys Ala  
35 40 45  
Lys Ile Gln Asp Lys Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile  
50 55 60  
Phe Ala Gly Lys Gln Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn  
65 70 75 80  
Ile Gln Lys Glu Ser Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly  
85 90 95  
Thr Asp Ile Met Thr Gln Ser Gln Lys Phe Met Ser Thr Ser Val Gly  
100 105 110  
Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Asp Thr Asn  
115 120 125  
Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Glu Pro Leu Leu  
130 135 140  
Phe Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly  
145 150 155 160  
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser  
165 170 175  
Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Leu  
180 185 190  
Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly Ser Thr Ser Gly  
195 200 205  
Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Glu Val Lys  
210 215 220  
Val Glu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Met Lys  
225 230 235 240  
Leu Ser Cys Val Val Ser Gly Phe Thr Phe Gly Asn Tyr Trp Met Asn  
245 250 255  
Trp Val Arg Gln Ser Pro Glu Lys Gly Leu Glu Trp Ile Ala Glu Ile  
260 265 270  
Arg Leu Lys Ser Asn Asn Phe Ala Arg Tyr Tyr Ala Glu Ser Val Lys  
275 280 285

PCB903024PBT\_PCT.txt

Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Ser Ser Val Tyr Leu  
 290 295 300  
 Gln Met Ile Asn Leu Arg Ala Glu Asp Thr Gly Ile Tyr Tyr Cys Thr  
 305 310 315 320  
 Ser Tyr Gly Asn Tyr Val Gly His Tyr Phe Asp His Trp Gly Gln Gly  
 325 330 335  
 Thr Thr Leu Thr Val Ser Ser Phe Ala Ile Arg Trp Gly Phe Ile Pro  
 340 345 350  
 Leu Val Ile Tyr Leu Gly Phe Lys Arg Gly Ala Asp Pro Gly Met Pro  
 355 360 365  
 Glu Pro Thr Val Leu Ser Leu Leu Trp Gly  
 370 375

<210> 67  
 <211> 312  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of scFvMEL-TOM7-myc/His

<400> 67  
 Met Thr Asp Ile Val Met Thr Gln Ser Gln Lys Phe Met Ser Thr Ser  
 1 5 10 15  
 Val Gly Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Asp  
 20 25 30  
 Thr Asn Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Glu Pro  
 35 40 45  
 Leu Leu Phe Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Asp Arg Phe  
 50 55 60  
 Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val  
 65 70 75 80  
 Gln Ser Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr  
 85 90 95  
 Pro Leu Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Gly Ser Thr  
 100 105 110  
 Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr Lys Gly Glu  
 115 120 125  
 Val Lys Val Glu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser  
 130 135 140  
 Met Lys Leu Ser Cys Val Val Ser Gly Phe Thr Phe Gly Asn Tyr Trp  
 145 150 155 160  
 Met Asn Trp Val Arg Gln Ser Pro Glu Lys Gly Leu Glu Trp Ile Ala  
 165 170 175  
 Glu Ile Arg Leu Lys Ser Asn Asn Phe Ala Arg Tyr Tyr Ala Glu Ser  
 180 185 190  
 Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Ser Ser Val  
 195 200 205

PCB903024PBT\_PCT.txt

Tyr Leu Gln Met Ile Asn Leu Arg Ala Glu Asp Thr Gly Ile Tyr Tyr  
 210 215 220  
 Cys Thr Ser Tyr Gly Asn Tyr Val Gly His Tyr Phe Asp His Trp Gly  
 225 230 235 240  
 Gln Gly Thr Thr Leu Thr Val Ser Ser Phe Ala Ile Arg Trp Gly Phe  
 245 250 255  
 Ile Pro Leu Val Ile Tyr Leu Gly Phe Lys Arg Gly Ala Asp Pro Gly  
 260 265 270  
 Met Pro Glu Pro Thr Val Leu Ser Leu Leu Trp Gly Leu Glu Ser Arg  
 275 280 285  
 Gly Pro Phe Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn Met His  
 290 295 300  
 Thr Gly His His His His His His  
 305 310

<210> 68  
 <211> 250  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of scFvPD-L1

<400> 68  
 Met Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Ala  
 1 5 10 15  
 Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn  
 20 25 30  
 Ser Arg Thr Arg Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly  
 35 40 45  
 Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly  
 50 55 60  
 Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu  
 65 70 75 80  
 Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln  
 85 90 95  
 Gln Ser Tyr Asp Val Val Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu  
 100 105 110  
 Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
 115 120 125  
 Gln Val Gln Val Gln Gln Ser Gly Ala Glu Leu Ala Glu Pro Gly Ala  
 130 135 140  
 Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr Ser Tyr  
 145 150 155 160  
 Trp Met His Trp Leu Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
 165 170 175  
 Gly Tyr Ile Asn Pro Ser Ser Asp Tyr Asn Glu Tyr Ser Glu Lys Phe  
 180 185 190

PCB903024PBT\_PCT.txt

Met Asp Lys Ala Thr Leu Thr Ala Asp Lys Ala Ser Thr Thr Ala Tyr  
 195 200 205

Met Gln Leu Ile Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
 210 215 220

Ala Arg Ser Gly Trp Leu Val His Gly Asp Tyr Tyr Phe Asp Tyr Trp  
 225 230 235 240

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser  
 245 250

&lt;210&gt; 69

&lt;211&gt; 315

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; amino acid sequence of scFvPD-L1-TOM7-myc/His

&lt;400&gt; 69

Met Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Ala  
 1 5 10 15

Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn  
 20 25 30

Ser Arg Thr Arg Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly  
 35 40 45

Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly  
 50 55 60

Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu  
 65 70 75 80

Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln  
 85 90 95

Gln Ser Tyr Asp Val Val Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu  
 100 105 110

Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
 115 120 125

Gln Val Gln Val Gln Gln Ser Gly Ala Glu Leu Ala Glu Pro Gly Ala  
 130 135 140

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Ile Phe Thr Ser Tyr  
 145 150 155 160

Trp Met His Trp Leu Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
 165 170 175

Gly Tyr Ile Asn Pro Ser Ser Asp Tyr Asn Glu Tyr Ser Glu Lys Phe  
 180 185 190

Met Asp Lys Ala Thr Leu Thr Ala Asp Lys Ala Ser Thr Thr Ala Tyr  
 195 200 205

Met Gln Leu Ile Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
 210 215 220

Ala Arg Ser Gly Trp Leu Val His Gly Asp Tyr Tyr Phe Asp Tyr Trp  
 225 230 235 240

PCB903024PBT\_PCT.txt

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Leu Glu Phe Ala Ile Arg  
 245 250 255

Trp Gly Phe Ile Pro Leu Val Ile Tyr Leu Gly Phe Lys Arg Gly Ala  
 260 265 270

Asp Pro Gly Met Pro Glu Pro Thr Val Leu Ser Leu Leu Trp Gly Leu  
 275 280 285

Glu Ser Arg Gly Pro Phe Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
 290 295 300

Asn Met His Thr Gly His His His His His His  
 305 310 315

<210> 70  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> linker

<400> 70  
 ggggsggggs ggggs

15

<210> 71  
 <211> 75  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of ubiquitin

<400> 71  
 Gln Leu Phe Val Lys Thr Leu Thr Gly Lys Thr Val Thr Leu Glu Val  
 1 5 10 15

Glu Ser Ser Asp Thr Ile Asp Asn Val Lys Ser Lys Ile Gln Asp Lys  
 20 25 30

Glu Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln  
 35 40 45

Leu Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser  
 50 55 60

Thr Leu His Leu Val Leu Arg Leu Arg Gly Gly  
 65 70 75

<210> 72  
 <211> 225  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> nucleotides sequence coding ubiquitin

<400> 72  
 caacttttcg tcaaaactct aacaggggaag actgtaaccc tagaggttga atcttccgac 60

actattgaca acgtcaaaag taaaattcaa gataaagaag gtatccctcc ggatcagcag 120  
 48 페이지

PCB903024PBT\_PCT.txt

agattgattt ttgttggttaa gcaactagaa gatggtagaa cttgtctga ctacaacatc  
 caaaaggaat ctactcttca cttggtgttg agactccgcg gtgggt

180

225

<210> 73  
 <211> 400  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> amino acid sequence of p53

<400> 73  
 Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln Glu  
 1 5 10 15  
 Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu Ser  
 20 25 30  
 Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp Asp  
 35 40 45  
 Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro Arg  
 50 55 60  
 Met Pro Glu Ala Ala Pro Arg Val Ala Pro Ala Pro Ala Ala Pro Thr  
 65 70 75 80  
 Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser Val  
 85 90 95  
 Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly Phe  
 100 105 110  
 Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro Ala  
 115 120 125  
 Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln Leu  
 130 135 140  
 Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met Ala  
 145 150 155 160  
 Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys Pro  
 165 170 175  
 His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln His  
 180 185 190  
 Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp Arg  
 195 200 205  
 Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu Val  
 210 215 220  
 Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser Ser  
 225 230 235 240  
 Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu  
 245 250 255  
 Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val Arg  
 260 265 270  
 Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn Leu  
 49 페이지

PCB903024PBT\_PCT.txt

275

280

285

Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr Lys  
 290 295 300

Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys Lys  
 305 310 315 320

Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu Arg  
 325 330 335

Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp Ala  
 340 345 350

Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His Leu  
 355 360 365

Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met Phe  
 370 375 380

Lys Thr Glu Gly Pro Asp Ser Asp Leu Glu His His His His His His  
 385 390 395 400

&lt;210&gt; 74

&lt;211&gt; 1203

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; nucleotides sequence coding p53

&lt;400&gt; 74

gaggagccgc agtcagatcc tagcgtcgag cccctctga gtcaggaaac attttcagac 60  
 ctgtggaac tacttctga aaacaacgtt ctgtccccct tgccgtccca agcaatggat 120  
 gatttgatgc tgtccccgga cgatattgaa caatggttca ctgaagaccc aggtccagat 180  
 gaagctccca gaatgccaga ggctgtccc cgcgtggccc ctgcaccagc agctcctaca 240  
 ccggcggccc ctgcaccagc cccctcctgg cccctgtcat cttctgtccc tttccagaaa 300  
 acctaccagg gcagctacgg ttccgtctg ggcttcttgc attctgggac agccaagtct 360  
 gtgacttgca cgtactcccc tgcctcaac aagatgttt gccaaactggc caagacctgc 420  
 cctgtgcagc tgtgggttga ttccacaccc ccgcccggca cccggtccg cgccatggcc 480  
 atctacaagc agtcacagca catgacggag gttgtgaggc gctgccccca ccatgagcgc 540  
 tgctcagata gcgatgttct ggccctcct cagcatctta tccgagtga aggaaatttg 600  
 cgtgtggagt atttggatga cagaacact ttctgacata gtgtggtggt gccctatgag 660  
 ccgcctgagg ttggctctga ctgtaccacc atccactaca actacatgtg taacagttcc 720  
 tgcattggcg gcatgaaccg gaggccatc ctacacatca tcacactgga agactccagt 780  
 ggtaatctac tgggacggaa cagctttgag gtgcgtgttt gtgcctgtcc tgggagagac 840  
 cggcgcacag aggaagagaa tctccgcaag aaaggggagc ctaccacga gctgccccca 900  
 gggagcacta agcgagcact gcccaacaac accagctcct ctcccagcc aaagaagaaa 960  
 ccactggatg gagaatatit cacccttcag atccgtgggc gtgagcgctt cgagatgttc 1020

PCB903024PBT\_PCT.txt

cgagagctga atgaggcctt ggaactcaag gatgccagg ctgggaagga gccagggggg 1080  
 agcaggggtc actccagcca cctgaagtcc aaaaagggtc agtctacctc ccgccataaa 1140  
 aaactcatgt tcaagacaga agggcctgac tcagacctcg agcaccacca ccaccaccac 1200  
 tag 1203

<210> 75  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM70 of *S. cerevisiae*

<400> 75  
 Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Phe Ala Thr Val  
 1 5 10 15  
 Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr  
 20 25

<210> 76  
 <211> 60  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM70 of *Homo sapiens*

<400> 76  
 Met Ala Ala Ser Lys Pro Val Glu Ala Ala Val Val Ala Ala Ala Val  
 1 5 10 15  
 Pro Ser Ser Gly Ser Gly Val Gly Gly Gly Gly Thr Ala Gly Pro Gly  
 20 25 30  
 Thr Gly Gly Leu Pro Arg Trp Gln Leu Ala Leu Ala Val Gly Ala Pro  
 35 40 45  
 Leu Leu Leu Gly Ala Gly Ala Ile Tyr Leu Trp Ser  
 50 55 60

<210> 77  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM20 of *S. cerevisiae*

<400> 77  
 Met Ser Gln Ser Asn Pro Ile Leu Arg Gly Leu Ala Ile Thr Thr Ala  
 1 5 10 15  
 Ile Ala Ala Leu Ser Ala Thr Gly Tyr Ala Ile Tyr Phe  
 20 25

<210> 78  
 <211> 24

PCB903024PBT\_PCT.txt

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM20 of Homo sapiens

<400> 78  
 Met Val Gly Arg Asn Ser Ala Ile Ala Ala Gly Val Cys Gly Ala Leu  
 1 5 10 15  
 Phe Ile Gly Tyr Cys Ile Tyr Phe  
 20

<210> 79  
 <211> 22  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> OM45 of S. cerevisiae

<400> 79  
 Met Ser Ser Arg Ile Ile Val Gly Ser Ala Ala Leu Ala Ala Ala Ile  
 1 5 10 15  
 Thr Ala Ser Ile Met Val  
 20

<210> 80  
 <211> 23  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM5 of S. cerevisiae

<400> 80  
 Ala Ala Tyr Val Ala Ala Phe Leu Trp Val Ser Pro Met Ile Trp His  
 1 5 10 15  
 Leu Val Lys Lys Gln Trp Lys  
 20

<210> 81  
 <211> 24  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM5 of Homo sapiens

<400> 81  
 Ile Arg Asn Phe Leu Ile Tyr Val Ala Leu Leu Arg Val Thr Pro Phe  
 1 5 10 15  
 Ile Leu Lys Lys Leu Asp Ser Ile  
 20

<210> 82  
 <211> 41

PCB903024PBT\_PCT.txt

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM7 of *S. cerevisiae*

<400> 82  
 Ile Leu Thr Leu Thr His Asn Val Ala His Tyr Gly Trp Ile Pro Phe  
 1 5 10 15  
 Val Leu Tyr Leu Gly Trp Ala His Thr Ser Asn Arg Pro Asn Phe Leu  
 20 25 30  
 Asn Leu Leu Ser Pro Leu Pro Ser Val  
 35 40

<210> 83  
 <211> 35  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM7 of *Homo sapiens*

<400> 83  
 Phe Ala Ile Arg Trp Gly Phe Ile Pro Leu Val Ile Tyr Leu Gly Phe  
 1 5 10 15  
 Lys Arg Gly Ala Asp Pro Gly Met Pro Glu Pro Thr Val Leu Ser Leu  
 20 25 30  
 Leu Trp Gly  
 35

<210> 84  
 <211> 55  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM22 of *S. cerevisiae*

<400> 84  
 Leu Ala Trp Thr Leu Thr Thr Thr Ala Leu Leu Leu Gly Val Pro Leu  
 1 5 10 15  
 Ser Leu Ser Ile Leu Ala Glu Gln Gln Leu Ile Glu Met Glu Lys Thr  
 20 25 30  
 Phe Asp Leu Gln Ser Asp Ala Asn Asn Ile Leu Ala Gln Gly Glu Lys  
 35 40 45  
 Asp Ala Ala Ala Thr Ala Asn  
 50 55

<210> 85  
 <211> 60  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> TOM22 of *Homo sapiens*

PCB903024PBT\_PCT.txt

<400> 85  
 Ala Ala Leu Trp Ile Gly Thr Thr Ser Phe Met Ile Leu Val Leu Pro  
 1 5 10 15  
 Val Val Phe Glu Thr Glu Lys Leu Gln Met Glu Gln Gln Gln Leu  
 20 25 30  
 Gln Gln Arg Gln Ile Leu Leu Gly Pro Asn Thr Gly Leu Ser Gly Gly  
 35 40 45  
 Met Pro Gly Ala Leu Pro Ser Leu Pro Gly Lys Ile  
 50 55 60

<210> 86  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fis1 of *S. cerevisiae*

<400> 86  
 Gly Val Val Val Ala Gly Gly Val Leu Ala Gly Ala Val Ala Val Ala  
 1 5 10 15  
 Ser Phe Phe Leu Arg Asn Lys Arg Arg  
 20 25

<210> 87  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fis1 of *Homo sapiens*

<400> 87  
 Gly Leu Val Gly Met Ala Ile Val Gly Gly Met Ala Leu Gly Val Ala  
 1 5 10 15  
 Gly Leu Ala Gly Leu Ile Gly Leu Ala Val Ser Lys Ser Lys Ser  
 20 25 30

<210> 88  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Bcl-2 alpha of *Homo sapiens*

<400> 88  
 Leu Ser Leu Lys Thr Leu Leu Ser Leu Ala Leu Val Gly Ala Cys Ile  
 1 5 10 15  
 Thr Leu Gly Ala Tyr Leu Gly His Lys  
 20 25

PCB903024PBT\_PCT.txt

<210> 89  
 <211> 19  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> VAMP1 of *S. cerevisiae*

<400> 89  
 Met Ile Met Leu Gly Ala Ile Cys Ala Ile Ile Val Val Val Ile Val  
 1 5 10 15

Arg Arg Asp

<210> 90  
 <211> 22  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> VAMP1 of *Homo sapiens*

<400> 90  
 Met Met Ile Met Leu Gly Ala Ile Cys Ala Ile Ile Val Val Val Ile  
 1 5 10 15

Val Ile Tyr Phe Phe Thr  
 20

<210> 91  
 <211> 60  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> P53-promoter-S

<400> 91  
 gggcatgctc gggcatgccc gggcatgctc gggcatgccc gggcatgctc gggcatgccc 60  
 60

<210> 92  
 <211> 60  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> P53-promoter-AS

<400> 92  
 gggcatgccc gagcatgccc gggcatgccc gagcatgccc gggcatgccc gagcatgccc 60  
 60