

342-57 PCT_ST25
SEQUENCE LISTING

<110> Ganymed Pharmaceuticals AG et al.

<120> Cancer therapy using target-directed antibodies in vivo

<130> 342-57 PCT

<150> EP 10 006 957.4

<151> 2010-07-06

<150> US 61/361,632

<151> 2010-07-06

<160> 13

<170> PatentIn version 3.5

<210> 1

<211> 1369

<212> DNA

<213> Homo sapiens

<400> 1

cgacactcgg cctaggaatt tcccttatct ccttcgcagt gcagctcctt caacctcgcc	60
atggcctctg ccggaatgca gacacctgga gtcgtcctga cactgctggg ctgggtgaat	120
ggcctggtct cctgtgccct gcccatgtgg aaggtgaccg ctttcacatcg caacagcatc	180
gtggtggccc aggtggtgtg ggagggcctg tggatgtcct gcgtggtgca gagcaccggc	240
cagatgcagt gcaaggtgta cgactcactg ctggcgctgc cacaggacct gcaggctgca	300
cgtgccctct gtgtcatcgc cctccttggt gccctgttcg gcttgctggt ctaccttgct	360
ggggccaagt gtaccacctg tgtggaggag aaggattcca aggcccgctt ggtgctcacc	420
tctgggattg tctttgtcat ctacggggc ctgacgctaa tccccgtgtg ctggacggcg	480
catgccatca tccgggactt ctataacccc ctggtggctg agggccaaaa gcgggagctg	540
ggggcctccc tctacttggg ctgggcggcc tcaggccttt tgttgctggg tggggggttg	600
ctgtgctgca cttgccctc gggggggtcc caggggccca gccattacat ggcccgtac	660
tcaacatctg cccctgccat ctctcggggg ccctctgagt accctaccaa gaattacgtc	720
tgacgtggag gggaatgggg gctccgctgg cgctagagcc atccagaagt ggcagtggcc	780
aacagctttg ggatgggttc gtaccttttg tttctgcctc ctgctatttt tcttttgact	840
gaggatattt aaaattcatt tgaaaactga gccaaagtgt tgactcagac tctcacttag	900
gctctgctgt ttctaccct tggatgatgg agccaaagag gggatgcttt gagattctgg	960
atcttgacat gcccatctta gaagccagtc aagctatgga actaatgcgg aggctgcttg	1020
ctgtgctggc tttgcaacaa gacagactgt cccaagagt tcctgctgct gctgggggct	1080
gggcttcct agatgtcact ggacagctgc ccccatcct actcaggctc ctggagctcc	1140
tctcttcacc cctggaaaaa caaatgatct gttaacaaag gactgccac ctccggaact	1200
tctgacctct gtttcctccg tcctgataag acgtccaccc cccaggcca ggtcccagct	1260
atgtagacct ccgccccac ctccaacact gcaccttct gccctgcccc cctcgtctca	1320

ccccctttac actcacattt ttatcaaata aagcatgttt tgtagtgc

1369

<210> 2
 <211> 220
 <212> PRT
 <213> Homo sapiens

<400> 2

Met Ala Ser Ala Gly Met Gln Ile Leu Gly Val Val Leu Thr Leu Leu
 1 5 10 15

Gly Trp Val Asn Gly Leu Val Ser Cys Ala Leu Pro Met Trp Lys Val
 20 25 30

Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val Val Trp Glu
 35 40 45

Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
 50 55 60

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

Arg Ala Leu Cys Val Ile Ala Leu Leu Val Ala Leu Phe Gly Leu Leu
 85 90 95

Val Tyr Leu Ala Gly Ala Lys Cys Thr Thr Cys Val Glu Glu Lys Asp
 100 105 110

Ser Lys Ala Arg Leu Val Leu Thr Ser Gly Ile Val Phe Val Ile Ser
 115 120 125

Gly Val Leu Thr Leu Ile Pro Val Cys Trp Thr Ala His Ala Ile Ile
 130 135 140

Arg Asp Phe Tyr Asn Pro Leu Val Ala Glu Ala Gln Lys Arg Glu Leu
 145 150 155 160

Gly Ala Ser Leu Tyr Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu
 165 170 175

Gly Gly Gly Leu Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly
 180 185 190

Pro Ser His Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser
 195 200 205

Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
 210 215 220

<210> 3

342-57 PCT_ST25

<211> 53
 <212> PRT
 <213> Homo sapiens

<400> 3

Pro Met Trp Lys Val Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala
 1 5 10 15

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

Gly Gln Met Gln Cys Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln
 35 40 45

Asp Leu Gln Ala Ala
 50

<210> 4
 <211> 33
 <212> PRT
 <213> Homo sapiens

<400> 4

Glu Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly Gln Met Gln
 1 5 10 15

Cys Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala
 20 25 30

Ala

<210> 5
 <211> 13
 <212> PRT
 <213> Homo sapiens

<400> 5

Arg Asp Phe Tyr Asn Pro Leu Val Ala Glu Ala Gln Lys
 1 5 10

<210> 6
 <211> 220
 <212> PRT
 <213> Homo sapiens

<400> 6

Met Ala Ser Ala Gly Met Gln Ile Leu Gly Val Val Leu Thr Leu Leu
 1 5 10 15

Gly Trp Val Asn Gly Leu Val Ser Cys Ala Leu Pro Met Trp Lys Val
 20 25 30

Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val Val Trp Glu
 Page 3

35

40

45

Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
 50 55 60

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

Arg Ala Leu Cys Val Ile Ala Leu Leu Val Ala Leu Phe Gly Leu Leu
 85 90 95

Val Tyr Leu Ala Gly Ala Lys Cys Thr Thr Cys Val Glu Glu Lys Asp
 100 105 110

Ser Lys Ala Arg Leu Val Leu Thr Ser Gly Ile Val Phe Val Ile Ser
 115 120 125

Gly Val Leu Thr Leu Ile Pro Val Cys Trp Thr Ala His Ala Val Ile
 130 135 140

Arg Asp Phe Tyr Asn Pro Leu Val Ala Glu Ala Gln Lys Arg Glu Leu
 145 150 155 160

Gly Ala Ser Leu Tyr Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu
 165 170 175

Gly Gly Gly Leu Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly
 180 185 190

Pro Ser His Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser
 195 200 205

Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
 210 215 220

<210> 7
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 7

Met Ala Ser Thr Gly Leu Glu Leu Leu Gly Met Thr Leu Ala Val Leu
 1 5 10 15

Gly Trp Leu Gly Thr Leu Val Ser Cys Ala Leu Pro Leu Trp Lys Val
 20 25 30

Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val Val Trp Glu
 35 40 45

Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
 50 55 60

342-57 PCT_ST25

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

Arg Ala Leu Cys Val Ile Ala Leu Leu Leu Ala Leu Leu Gly Leu Leu
85 90 95

Val Ala Ile Thr Gly Ala Gln Cys Thr Thr Cys Val Glu Asp Glu Gly
100 105 110

Ala Lys Ala Arg Ile Val Leu Thr Ala Gly Val Ile Leu Leu Leu Ala
115 120 125

Gly Ile Leu Val Leu Ile Pro Val Cys Trp Thr Ala His Ala Ile Ile
130 135 140

Gln Asp Phe Tyr Asn Pro Leu Val Ala Glu Ala Leu Lys Arg Glu Leu
145 150 155 160

Gly Ala Ser Leu Tyr Leu Gly Trp Ala Ala Ala Ala Leu Leu Met Leu
165 170 175

Gly Gly Gly Leu Leu Cys Cys Thr Cys Pro Pro Pro Gln Val Glu Arg
180 185 190

Pro Arg Gly Pro Arg Leu Gly Tyr Ser Ile Pro Ser Arg Ser Gly Ala
195 200 205

Ser Gly Leu Asp Lys Arg Asp Tyr Val
210 215

<210> 8
<211> 209
<212> PRT
<213> Homo sapiens

<400> 8

Met Ala Ser Met Gly Leu Gln Val Met Gly Ile Ala Leu Ala Val Leu
1 5 10 15

Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg Val
20 25 30

Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ser Gln Thr Ile Trp Glu
35 40 45

Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
50 55 60

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

342-57 PCT_ST25

Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val Leu
85 90 95

Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu Ser
100 105 110

Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala
115 120 125

Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile
130 135 140

Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu Met
145 150 155 160

Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu
165 170 175

Gly Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro
180 185 190

Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr
195 200 205

Val

<210> 9
<211> 220
<212> PRT
<213> Homo sapiens

<400> 9

Met Ser Met Gly Leu Glu Ile Thr Gly Thr Ala Leu Ala Val Leu Gly
1 5 10 15

Trp Leu Gly Thr Ile Val Cys Cys Ala Leu Pro Met Trp Arg Val Ser
20 25 30

Ala Phe Ile Gly Ser Asn Ile Ile Thr Ser Gln Asn Ile Trp Glu Gly
35 40 45

Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys Lys
50 55 60

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

Ala Leu Ile Val Val Ala Ile Leu Leu Ala Ala Phe Gly Leu Leu Val
85 90 95

342-57 PCT_ST25

Ala Leu Val Gly Ala Gln Cys Thr Asn Cys Val Gln Asp Asp Thr Ala
100 105 110

Lys Ala Lys Ile Thr Ile Val Ala Gly Val Leu Phe Leu Leu Ala Ala
115 120 125

Leu Leu Thr Leu Val Pro Val Ser Trp Ser Ala Asn Thr Ile Ile Arg
130 135 140

Asp Phe Tyr Asn Pro Val Val Pro Glu Ala Gln Lys Arg Glu Met Gly
145 150 155 160

Ala Gly Leu Tyr Val Gly Trp Ala Ala Ala Ala Leu Gln Leu Leu Gly
165 170 175

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

Ala Thr Lys Val Val Tyr Ser Ala Pro Arg Ser Thr Gly Pro Gly Ala
195 200 205

Ser Leu Gly Thr Gly Tyr Asp Arg Lys Asp Tyr Val
210 215 220

<210> 10
<211> 780
<212> DNA
<213> Artificial

<220>
<223> synthetic nucleic acid

<400> 10	
caagcgcgtc aattaaccct cactaaaggg aacaaaagct gttaattaac taaggtagcca	60
agcttgccac catggccagc gccggcatgc agatcctggg agtggtgctg accctgctgg	120
gctgggtgaa cggcctggtg tcctgcgccc tgcccatgtg gaaagtgacc gccttcatcg	180
gcaacagcat cgtggtggcc caggctcgtgt gggagggcct gtggatgagc tgtgtggtgc	240
agagcaccgg ccagatgcag tgcaaggtgt acgacagcct gctggccctg cctcaggatc	300
tgcaggccgc cagagccctg tgtgtgatcg ccctgctggt cggcctgttc ggcctgctgg	360
tgtacctcgc tggcgccaag tgcaccacct gtgtggagga aaaggacagc aaggcccggc	420
tggtcctgac aagcggcatc gtgttcgtga tcagcggcgt gctgacactg atccccgtgt	480
gctggaccgc ccacgccatc atccgggact tctacaaccc tctggtggcc gaggcccaga	540
agagagagct gggcgccagc ctgtatctgg gatgggccgc ctcaggactg ctgctgctgg	600
gcggaggcct gctgtgctgt acatgtccta gcggcggtc ccagggccct agccactaca	660
tggcccggta cagcaccagc gccctgcca tcagcagagg cccagcgag taccaccca	720
agaactacgt gtgataggaa ttcgagctct tatggcgcgc ccaattcgcc ctatagtgag	780

342-57 PCT_ST25

<210> 11
 <211> 165
 <212> DNA
 <213> Artificial

<220>
 <223> synthetic nucleic acid

<400> 11
 ggcgcgccaa ggtaccaagc ttgccaccat ggaaaccgac accctgctgc tgtgggtgct 60
 gctcctgtgg gtcccaggct ctacaggcga cgccgcccag cccagagact tctacaaccc 120
 cctggtggcc gaggcccaga agctcgagtc tagaggggta attaa 165

<210> 12
 <211> 38
 <212> PRT
 <213> Artificial

<220>
 <223> synthetic peptide

<400> 12
 Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
 1 5 10 15

Gly Ser Thr Gly Asp Ala Ala Gln Pro Arg Asp Phe Tyr Asn Pro Leu
 20 25 30

Val Ala Glu Ala Gln Lys
 35

<210> 13
 <211> 20
 <212> DNA
 <213> Artificial

<220>
 <223> oligonucleotide

<400> 13
 tccatgacgt tcctgacgtt 20