

SEQUENCE LISTING

<110> JUNTENDO EDUCATIONAL FOUNDATION

<120> Antibodies that bind to cleaved form of mutant calreticulin for
the diagnosis, prevention, and therapy against myeloproliferative
neoplasms

<130> JUSM0023

<150> JP 2019-036119

<151> 2019-02-28

<160> 34

<170> PatentIn version 3.5

<210> 1

<211> 13

<212> PRT

<213> Homo sapiens

<400> 1

Arg Arg Met Met Arg Thr Lys Met Arg Met Arg Arg Met

1 5 10

<210> 2

<211> 417

<212> PRT

<213> Homo sapiens

<400> 2

Met Leu Leu Ser Val Pro Leu Leu Leu Gly Leu Leu Gly Leu Ala Val

1 5 10 15

Ala Glu Pro Ala Val Tyr Phe Lys Glu Gln Phe Leu Asp Gly Asp Gly

20 25 30

Trp Thr Ser Arg Trp Ile Glu Ser Lys His Lys Ser Asp Phe Gly Lys

35 40 45

Phe Val Leu Ser Ser Gly Lys Phe Tyr Gly Asp Glu Glu Lys Asp Lys

50 55 60

Gly Leu Gln Thr Ser Gln Asp Ala Arg Phe Tyr Ala Leu Ser Ala Ser

65 70 75 80

Phe Glu Pro Phe Ser Asn Lys Gly Gln Thr Leu Val Val Gln Phe Thr

85 90 95

Val Lys His Glu Gln Asn Ile Asp Cys Gly Gly Gly Tyr Val Lys Leu

100 105 110

Phe Pro Asn Ser Leu Asp Gln Thr Asp Met His Gly Asp Ser Glu Tyr

115 120 125

Asn Ile Met Phe Gly Pro Asp Ile Cys Gly Pro Gly Thr Lys Lys Val

130 135 140

His Val Ile Phe Asn Tyr Lys Gly Lys Asn Val Leu Ile Asn Lys Asp

145 150 155 160

Ile Arg Cys Lys Asp Asp Glu Phe Thr His Leu Tyr Thr Leu Ile Val

165 170 175

Arg Pro Asp Asn Thr Tyr Glu Val Lys Ile Asp Asn Ser Gln Val Glu

180 185 190

Ser Gly Ser Leu Glu Asp Asp Trp Asp Phe Leu Pro Pro Lys Lys Ile

195

200

205

Lys Asp Pro Asp Ala Ser Lys Pro Glu Asp Trp Asp Glu Arg Ala Lys

210

215

220

Ile Asp Asp Pro Thr Asp Ser Lys Pro Glu Asp Trp Asp Lys Pro Glu

225

230

235

240

His Ile Pro Asp Pro Asp Ala Lys Lys Pro Glu Asp Trp Asp Glu Glu

245

250

255

Met Asp Gly Glu Trp Glu Pro Pro Val Ile Gln Asn Pro Glu Tyr Lys

260

265

270

Gly Glu Trp Lys Pro Arg Gln Ile Asp Asn Pro Asp Tyr Lys Gly Thr

275

280

285

Trp Ile His Pro Glu Ile Asp Asn Pro Glu Tyr Ser Pro Asp Pro Ser

290 295 300

Ile Tyr Ala Tyr Asp Asn Phe Gly Val Leu Gly Leu Asp Leu Trp Gln

305 310 315 320

Val Lys Ser Gly Thr Ile Phe Asp Asn Phe Leu Ile Thr Asn Asp Glu

325 330 335

Ala Tyr Ala Glu Glu Phe Gly Asn Glu Thr Trp Gly Val Thr Lys Ala

340 345 350

Ala Glu Lys Gln Met Lys Asp Lys Gln Asp Glu Glu Gln Arg Leu Lys

355 360 365

Glu Glu Glu Glu Asp Lys Lys Arg Lys Glu Glu Glu Glu Ala Glu Asp

370 375 380

Lys Glu Asp Asp Glu Asp Lys Asp Glu Asp Glu Glu Asp Glu Glu Asp

385 390 395 400

Lys Glu Glu Asp Glu Glu Glu Asp Val Pro Gly Gln Ala Lys Asp Glu

405

410

415

Leu

<210> 3

<211> 411

<212> PRT

<213> Homo sapiens

<400> 3

Met Leu Leu Ser Val Pro Leu Leu Leu Gly Leu Leu Gly Leu Ala Val

1

5

10

15

Ala Glu Pro Ala Val Tyr Phe Lys Glu Gln Phe Leu Asp Gly Asp Gly

20

25

30

Trp Thr Ser Arg Trp Ile Glu Ser Lys His Lys Ser Asp Phe Gly Lys

35

40

45

Phe Val Leu Ser Ser Gly Lys Phe Tyr Gly Asp Glu Glu Lys Asp Lys

50 55 60

Gly Leu Gln Thr Ser Gln Asp Ala Arg Phe Tyr Ala Leu Ser Ala Ser

65 70 75 80

Phe Glu Pro Phe Ser Asn Lys Gly Gln Thr Leu Val Val Gln Phe Thr

85 90 95

Val Lys His Glu Gln Asn Ile Asp Cys Gly Gly Gly Tyr Val Lys Leu

100 105 110

Phe Pro Asn Ser Leu Asp Gln Thr Asp Met His Gly Asp Ser Glu Tyr

115 120 125

Asn Ile Met Phe Gly Pro Asp Ile Cys Gly Pro Gly Thr Lys Lys Val

130 135 140

His Val Ile Phe Asn Tyr Lys Gly Lys Asn Val Leu Ile Asn Lys Asp

145 150 155 160

Ile Arg Cys Lys Asp Asp Glu Phe Thr His Leu Tyr Thr Leu Ile Val

165 170 175

Arg Pro Asp Asn Thr Tyr Glu Val Lys Ile Asp Asn Ser Gln Val Glu

180 185 190

Ser Gly Ser Leu Glu Asp Asp Trp Asp Phe Leu Pro Pro Lys Lys Ile

195 200 205

Lys Asp Pro Asp Ala Ser Lys Pro Glu Asp Trp Asp Glu Arg Ala Lys

210 215 220

Ile Asp Asp Pro Thr Asp Ser Lys Pro Glu Asp Trp Asp Lys Pro Glu

225 230 235 240

His Ile Pro Asp Pro Asp Ala Lys Lys Pro Glu Asp Trp Asp Glu Glu

245 250 255

Met Asp Gly Glu Trp Glu Pro Pro Val Ile Gln Asn Pro Glu Tyr Lys

260 265 270

Gly Glu Trp Lys Pro Arg Gln Ile Asp Asn Pro Asp Tyr Lys Gly Thr

275

280

285

Trp Ile His Pro Glu Ile Asp Asn Pro Glu Tyr Ser Pro Asp Pro Ser

290

295

300

Ile Tyr Ala Tyr Asp Asn Phe Gly Val Leu Gly Leu Asp Leu Trp Gln

305

310

315

320

Val Lys Ser Gly Thr Ile Phe Asp Asn Phe Leu Ile Thr Asn Asp Glu

325

330

335

Ala Tyr Ala Glu Glu Phe Gly Asn Glu Thr Trp Gly Val Thr Lys Ala

340

345

350

Ala Glu Lys Gln Met Lys Asp Lys Gln Asp Glu Glu Gln Arg Thr Arg

355

360

365

Arg Met Met Arg Thr Lys Met Arg Met Arg Arg Met Arg Arg Thr Arg

370 375 380

Arg Lys Met Arg Arg Lys Met Ser Pro Ala Arg Pro Arg Thr Ser Cys

385 390 395 400

Arg Glu Ala Cys Leu Gln Gly Trp Thr Glu Ala

405 410

<210> 4

<211> 430

<212> PRT

<213> Homo sapiens

<400> 4

Met Leu Leu Ser Val Pro Leu Leu Leu Gly Leu Leu Gly Leu Ala Val

1 5 10 15

Ala Glu Pro Ala Val Tyr Phe Lys Glu Gln Phe Leu Asp Gly Asp Gly

20 25 30

Trp Thr Ser Arg Trp Ile Glu Ser Lys His Lys Ser Asp Phe Gly Lys

35 40 45

Phe Val Leu Ser Ser Gly Lys Phe Tyr Gly Asp Glu Glu Lys Asp Lys

50 55 60

Gly Leu Gln Thr Ser Gln Asp Ala Arg Phe Tyr Ala Leu Ser Ala Ser

65 70 75 80

Phe Glu Pro Phe Ser Asn Lys Gly Gln Thr Leu Val Val Gln Phe Thr

85 90 95

Val Lys His Glu Gln Asn Ile Asp Cys Gly Gly Gly Tyr Val Lys Leu

100 105 110

Phe Pro Asn Ser Leu Asp Gln Thr Asp Met His Gly Asp Ser Glu Tyr

115 120 125

Asn Ile Met Phe Gly Pro Asp Ile Cys Gly Pro Gly Thr Lys Lys Val

130 135 140

His Val Ile Phe Asn Tyr Lys Gly Lys Asn Val Leu Ile Asn Lys Asp

145 150 155 160

Ile Arg Cys Lys Asp Asp Glu Phe Thr His Leu Tyr Thr Leu Ile Val

165 170 175

Arg Pro Asp Asn Thr Tyr Glu Val Lys Ile Asp Asn Ser Gln Val Glu

180 185 190

Ser Gly Ser Leu Glu Asp Asp Trp Asp Phe Leu Pro Pro Lys Lys Ile

195 200 205

Lys Asp Pro Asp Ala Ser Lys Pro Glu Asp Trp Asp Glu Arg Ala Lys

210 215 220

Ile Asp Asp Pro Thr Asp Ser Lys Pro Glu Asp Trp Asp Lys Pro Glu

225 230 235 240

His Ile Pro Asp Pro Asp Ala Lys Lys Pro Glu Asp Trp Asp Glu Glu

245 250 255

Met Asp Gly Glu Trp Glu Pro Pro Val Ile Gln Asn Pro Glu Tyr Lys

260 265 270

Gly Glu Trp Lys Pro Arg Gln Ile Asp Asn Pro Asp Tyr Lys Gly Thr

275 280 285

Trp Ile His Pro Glu Ile Asp Asn Pro Glu Tyr Ser Pro Asp Pro Ser

290 295 300

Ile Tyr Ala Tyr Asp Asn Phe Gly Val Leu Gly Leu Asp Leu Trp Gln

305 310 315 320

Val Lys Ser Gly Thr Ile Phe Asp Asn Phe Leu Ile Thr Asn Asp Glu

325 330 335

Ala Tyr Ala Glu Glu Phe Gly Asn Glu Thr Trp Gly Val Thr Lys Ala

340 345 350

Ala Glu Lys Gln Met Lys Asp Lys Gln Asp Glu Glu Gln Arg Leu Lys

355 360 365

Glu Glu Glu Glu Asp Lys Lys Arg Lys Glu Glu Glu Glu Ala Glu Asp

370

375

380

Asn Cys Arg Arg Met Met Arg Thr Lys Met Arg Met Arg Arg Met Arg

385

390

395

400

Arg Thr Arg Arg Lys Met Arg Arg Lys Met Ser Pro Ala Arg Pro Arg

405

410

415

Thr Ser Cys Arg Glu Ala Cys Leu Gln Gly Trp Thr Glu Ala

420

425

430

<210> 5

<211> 119

<212> PRT

<213> Rattus norvegicus

<400> 5

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ser

1

5

10

15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Asn

20 25 30

Phe Ile His Trp Ile Lys Gln Gln Pro Gly Asn Gly Leu Glu Trp Ile

35 40 45

Gly Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe

50 55 60

Asn Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys

85 90 95

Ala Arg Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr Trp Gly Gln Gly

100 105 110

Val Met Val Thr Val Ser Ser

115

<210> 6

<211> 121

<212> PRT

<213> Rattus norvegicus

<400> 6

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ser

1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr

20 25 30

Phe Val His Trp Ile Lys Gln Gln Pro Gly Asp Gly Leu Glu Trp Ile

35 40 45

Gly Trp Ile Tyr Pro Gly Asp Gly Asp Thr Glu Tyr Asn His Lys Phe

50 55 60

Asn Gly Lys Ser Thr Leu Thr Ala Asp Arg Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys

85 90 95

Ala Arg Gly Asn Tyr Tyr Asp Gly Arg Glu Val Met Asp Ala Trp Gly

100 105 110

Gln Gly Ala Ser Val Thr Val Ser Ser

115 120

<210> 7

<211> 121

<212> PRT

<213> Rattus norvegicus

<400> 7

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ser

1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr

20 25 30

Phe Val His Trp Ile Lys Gln Gln Pro Gly Asp Gly Leu Glu Trp Ile

35 40 45

Gly Trp Ile Tyr Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe

50 55 60

Asn Gly Lys Ala Thr Leu Thr Ala Asp Arg Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys

85 90 95

Ala Arg Gly Asn Tyr Tyr Asp Gly Arg Glu Val Met Asp Ala Trp Gly

100 105 110

Gln Gly Ala Ser Val Thr Val Ser Ser

115 120

<210> 8

<211> 107

<212> PRT

<213> Rattus norvegicus

<400> 8

Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Leu Gly

1 5 10 15

Glu Thr Val Ser Ile Glu Cys Leu Ala Ser Glu Asp Ile Tyr Ser Tyr

20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro Gln Leu Leu Ile

35 40 45

Phe Ala Ala Asn Arg Leu Gln Asp Gly Val Pro Ser Arg Phe Ser Gly

50 55 60

Ser Gly Ser Gly Thr Gln Phe Ser Leu Lys Ile Ser Gly Met Gln Pro

65 70 75 80

Glu Asp Glu Gly Asp Tyr Phe Cys Leu Gln Gly Ser Lys Phe Pro Tyr

85

90

95

Thr Phe Gly Pro Gly Thr Lys Leu Glu Leu Asn

100

105

<210> 9

<211> 112

<212> PRT

<213> Rattus norvegicus

<400> 9

Asp Val Val Leu Thr Gln Thr Pro Pro Thr Leu Ser Ala Thr Ile Gly

1

5

10

15

Gln Ser Val Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser

20

25

30

Asp Gly Glu Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35

40

45

Pro Gln Leu Leu Ile Tyr Ser Val Ser Asn Leu Glu Ser Gly Val Pro

50 55 60

Asn Arg Phe Ser Gly Ser Gly Ser Glu Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Gly Met Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Met Gln Ala

85 90 95

Thr His Gly Pro Tyr Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys

100 105 110

<210> 10

<211> 112

<212> PRT

<213> Rattus norvegicus

<400> 10

Asp Val Val Leu Thr Gln Thr Pro Pro Thr Leu Ser Ala Thr Ile Gly

1 5 10 15

Gln Ser Val Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser

20 25 30

Asp Gly Glu Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Cys

35 40 45

Pro Gln Leu Leu Ile Tyr Ser Val Ser Asn Leu Glu Ser Gly Val Pro

50 55 60

Asn Arg Phe Ser Gly Ser Gly Ser Glu Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Gly Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Met Gln Gly

85 90 95

Thr His Gly Pro Tyr Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys

100 105 110

<210> 11

<211> 357

<212> DNA

<213> Rattus norvegicus

<400> 11

cagggtacagc tgcagcaatc tggggctgaa ctggtgaagc ctgggtcctc agtgaaaatt 60

tcctgcaagg cttctggcta caccttcacc cgtaacttta tacactggat aaaacagcag 120

cctggaaatg gccttgagtg gattgggtgg attttcctg gagatggtga tacagagtac 180

aatcaaaagt tcaatgggaa ggcaacactc actgcagaca aatcgccag cacagcctat 240

atgcagctca gcagcctgac atctgaggac tctgcagtct atttctgtgc aagaggaaat 300

tacaactacg agtactttga ttactggggc caaggagtca tggtcacagt ctctca 357

<210> 12

<211> 363

<212> DNA

<213> Rattus norvegicus

<400> 12

cagggtacagc tgcagcaatc tggggctgaa ctggtgaagc ctgggtcctc agtgaaaatt 60

tcctgcaagg cttctggcta caccttcacc agttactttg tgcactggat aaaacagcag 120

cctggagatg gccttgagtg gattgggtgg atttatcctg gagatggtga tacagagtac 180

aatcacaagt tcaatgggaa gtcaacactc actgcagaca gatcctccag tacagcctat 240

atgcagctca gcagcctgac atctgaggac tctgcagtct atttctgtgc aagagggaat 300

tactatgatg gtcgggaagt tatggatgcc tggggtcaag gagcttcagt cactgtctcc 360

tca 363

<210> 13

<211> 363

<212> DNA

<213> Rattus norvegicus

<400> 13

caggtacagc tgcagcaatc tggggctgaa ctggtgaagc ctgggtcctc agtgaaaatt 60

tcctgcaagg cttctggcta caccttcacc agttactttg tgcactggat aaaacagcag 120

cctggagatg gccttgagtg gattgggtgg atttatcctg gagatggtga tacagagtac 180

aatcaaaagt tcaatgggaa ggcaacactc actgcagaca gatcctccag tacagcctat 240

atgcagctca gcagcctgac atctgaggac tctgcagtct atttctgtgc aagagggaat 300

tactatgatg gtcgggaagt tatggatgcc tggggtcaag gagcttcagt cactgtctcc 360

tca

363

<210> 14

<211> 321

<212> DNA

<213> Rattus norvegicus

<400> 14

gacatccaga tgacacagtc tccggcttcc ctgtctgcat ctctgggaga aactgtctcc 60

atcgagtgtc tagcaagtga ggacatttac agttatttag catggtatca acagaagcca 120

gggaaatctc ctgagctcct gatctttgct gcaaataagg tgcaagatgg ggtcccatca 180

cggttcagtg gcagtggatc tggcacacag ttttctctca agatcagcgg catgcaacct 240

gaagatgaag gggattattt ctgtctacag ggtccaagt ttccgtacac ctttggacct 300

gggaccaagc tggaactgaa c

321

<210> 15

<211> 336

<212> DNA

<213> Rattus norvegicus

<400> 15

gatgttgatgc tgaccagac tccaccact ttatcggcta ccattggaca atcgggtctcc 60

atctcttgca ggtcaagtca gagtctctta gatagtgatg gagaaaccta tttaaattgg 120

ttgctacaga ggccaggcca atctccacag cttctaattt attcgggtctc caacctggaa 180

tctgggtgcc ccaacaggtt cagtggcagt gggtcagaaa cagatttcac actcaaaatc 240

agtggaatgg aggctgaaga ttggggagtt tactactgca tgcaagctac ccatgggtccg 300

tacacgtttg gagctgggac caagctggaa ctgaaa 336

<210> 16

<211> 336

<212> DNA

<213> Rattus norvegicus

<400> 16

gatgttgatgc tgaccagac tccaccact ttatcggcta ccattggaca atcgggtctcc 60

atctcttgca ggtcaagtca gagtctctta gatagtgatg gagaaaccta tttaaattgg 120

ttgctacaga ggccaggcca atgtccacag cttctaattt attcgggtatc caacctggaa 180

tctgggtcc ccaacaggtt cagtggcagt gggtcagaaa cagatttcac actcaaatc 240

agtggagtgg aggctgaaga tttgggagtt tactactgca tgcaaggtag ccatgggtccg 300

tacacgtttg gagctgggac caagctggaa ctgaaa 336

<210> 17

<211> 10

<212> PRT

<213> Rattus norvegicus

<400> 17

Gly Tyr Thr Phe Thr Arg Asn Phe Ile His

1 5 10

<210> 18

<211> 17

<212> PRT

<213> Rattus norvegicus

<400> 18

Trp Ile Phe Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe Asn

1 5 10 15

Gly

<210> 19

<211> 10

<212> PRT

<213> Rattus norvegicus

<400> 19

Gly Asn Tyr Asn Tyr Glu Tyr Phe Asp Tyr

1 5 10

<210> 20

<211> 10

<212> PRT

<213> Rattus norvegicus

<400> 20

Gly Tyr Thr Phe Thr Ser Tyr Phe Val His

1 5 10

<210> 21

<211> 17

<212> PRT

<213> Rattus norvegicus

<400> 21

Trp Ile Tyr Pro Gly Asp Gly Asp Thr Glu Tyr Asn His Lys Phe Asn

1 5 10 15

Gly

<210> 22

<211> 12

<212> PRT

<213> Rattus norvegicus

<400> 22

Gly Asn Tyr Tyr Asp Gly Arg Glu Val Met Asp Ala

1 5 10

<210> 23

<211> 10

<212> PRT

<213> Rattus norvegicus

<400> 23

Gly Tyr Thr Phe Thr Ser Tyr Phe Val His

1 5 10

<210> 24

<211> 17

<212> PRT

<213> Rattus norvegicus

<400> 24

Trp Ile Tyr Pro Gly Asp Gly Asp Thr Glu Tyr Asn Gln Lys Phe Asn

1 5 10 15

Gly

<210> 25

<211> 12

<212> PRT

<213> Rattus norvegicus

<400> 25

Gly Asn Tyr Tyr Asp Gly Arg Glu Val Met Asp Ala

1 5 10

<210> 26

<211> 11

<212> PRT

<213> Rattus norvegicus

<400> 26

Leu Ala Ser Glu Asp Ile Tyr Ser Tyr Leu Ala

1 5 10

<210> 27

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 27

Ala Ala Asn Arg Leu Gln Asp

1 5

<210> 28

<211> 9

<212> PRT

<213> Rattus norvegicus

<400> 28

Leu Gln Gly Ser Lys Phe Pro Tyr Thr

1 5

<210> 29

<211> 16

<212> PRT

<213> Rattus norvegicus

<400> 29

Arg Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Glu Thr Tyr Leu Asn

1 5 10 15

<210> 30

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 30

Ser Val Ser Asn Leu Glu Ser

1 5

<210> 31

<211> 9

<212> PRT

<213> Rattus norvegicus

<400> 31

Met Gln Ala Thr His Gly Pro Tyr Thr

1 5

<210> 32

<211> 16

<212> PRT

<213> Rattus norvegicus

<400> 32

Arg Ser Ser Gln Ser Leu Leu Asp Ser Asp Gly Glu Thr Tyr Leu Asn

1 5 10 15

<210> 33

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 33

Ser Val Ser Asn Leu Glu Ser

1 5

<210> 34

<211> 9

<212> PRT

<213> Rattus norvegicus

<400> 34

Met Gln Gly Thr His Gly Pro Tyr Thr

1 5