

PCTAU2015050246-seq1-000001-EN-20150521
SEQUENCE LISTING

<110> Catalyst Therapeutics

<120> Methods for inhibiting necroptosis

<130> 515172

<160> 4

<170> PatentIn version 3.5

<210> 1

<211> 471

<212> PRT

<213> Homo sapiens

<400> 1

Met Glu Asn Leu Lys His Ile Ile Thr Leu Gly Gln Val Ile His Lys
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Arg Cys Glu Glu Met Lys Tyr Cys Lys Lys Gln Cys Arg Arg Leu Gly
20 25 30

His Arg Val Leu Gly Leu Ile Lys Pro Leu Glu Met Leu Gln Asp Gln
35 40 45

Gly Lys Arg Ser Val Pro Ser Glu Lys Leu Thr Thr Ala Met Asn Arg
50 55 60

Phe Lys Ala Ala Leu Glu Glu Ala Asn Gly Glu Ile Glu Lys Phe Ser
65 70 75 80

Asn Arg Ser Asn Ile Cys Arg Phe Leu Thr Ala Ser Gln Asp Lys Ile
85 90 95

Leu Phe Lys Asp Val Asn Arg Lys Leu Ser Asp Val Trp Lys Glu Leu
100 105 110

Ser Leu Leu Leu Gln Val Glu Gln Arg Met Pro Val Ser Pro Ile Ser
115 120 125

Gln Gly Ala Ser Trp Ala Gln Glu Asp Gln Gln Asp Ala Asp Glu Asp

130

135

140

Arg Arg Ala Phe Gln Met Leu Arg Arg Asp Asn Glu Lys Ile Glu Ala
 145 150 155 160

Ser Leu Arg Arg Leu Glu Ile Asn Met Lys Glu Ile Lys Glu Thr Leu
 165 170 175

Arg Gln Tyr Leu Pro Pro Lys Cys Met Gln Glu Ile Pro Gln Glu Gln
 180 185 190

Ile Lys Glu Ile Lys Lys Glu Gln Leu Ser Gly Ser Pro Trp Ile Leu
 195 200 205

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

Ala Pro Val Ala Ile Lys Val Phe Lys Lys Leu Gln Ala Gly Ser Ile
 225 230 235 240

Ala Ile Val Arg Gln Thr Phe Asn Lys Glu Ile Lys Thr Met Lys Lys
 245 250 255

Phe Glu Ser Pro Asn Ile Leu Arg Ile Phe Gly Ile Cys Ile Asp Glu
 260 265 270

Thr Val Thr Pro Pro Gln Phe Ser Ile Val Met Glu Tyr Cys Glu Leu
 275 280 285

Gly Thr Leu Arg Glu Leu Leu Asp Arg Glu Lys Asp Leu Thr Leu Gly
 290 295 300

Lys Arg Met Val Leu Val Leu Gly Ala Ala Arg Gly Leu Tyr Arg Leu
 305 310 315 320

His His Ser Glu Ala Pro Glu Leu His Gly Lys Ile Arg Ser Ser Asn
 325 330 335

Phe Leu Val Thr Gln Gly Tyr Gln Val Lys Leu Ala Gly Phe Glu Leu

340

345

350

Arg Lys Thr Gln Thr Ser Met Ser Leu Gly Thr Thr Arg Glu Lys Thr
 355 360 365

Asp Arg Val Lys Ser Thr Ala Tyr Leu Ser Pro Gln Glu Leu Glu Asp
 370 375 380

Val Phe Tyr Gln Tyr Asp Val Lys Ser Glu Ile Tyr Ser Phe Gly Ile
 385 390 395 400

Val Leu Trp Glu Ile Ala Thr Gly Asp Ile Pro Phe Gln Gly Cys Asn
 405 410 415

Ser Glu Lys Ile Arg Lys Leu Val Ala Val Lys Arg Gln Gln Glu Pro
 420 425 430

Leu Gly Glu Asp Cys Pro Ser Glu Leu Arg Glu Ile Ile Asp Glu Cys
 435 440 445

Arg Ala His Asp Pro Ser Val Arg Pro Ser Val Asp Glu Ile Leu Lys
 450 455 460

Lys Leu Ser Thr Phe Ser Lys
 465 470

<210> 2
 <211> 263
 <212> PRT
 <213> Homo sapiens

<400> 2

Met Glu Asn Leu Lys His Ile Ile Thr Leu Gly Gln Val Ile His Lys
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Arg Cys Glu Glu Met Lys Tyr Cys Lys Lys Gln Cys Arg Arg Leu Gly
 20 25 30

His Arg Val Leu Gly Leu Ile Lys Pro Leu Glu Met Leu Gln Asp Gln
 35 40 45

Gly Lys Arg Ser Val Pro Ser Glu Lys Leu Thr Thr Ala Met Asn Arg
 50 55 60

Phe Lys Ala Ala Leu Glu Glu Ala Asn Gly Glu Ile Glu Lys Phe Ser
 65 70 75 80

Asn Arg Ser Asn Ile Cys Arg Phe Leu Thr Ala Ser Gln Asp Lys Ile
 85 90 95

Leu Phe Lys Asp Val Asn Arg Lys Leu Ser Asp Val Trp Lys Glu Leu
 100 105 110

Ser Leu Leu Leu Gln Val Glu Gln Arg Met Pro Val Ser Pro Ile Ser
 115 120 125

Gln Gly Ala Ser Trp Ala Gln Glu Asp Gln Gln Asp Ala Asp Glu Asp
 130 135 140

Arg Arg Ala Phe Gln Met Leu Arg Arg Asp Asn Glu Lys Ile Glu Ala
 145 150 155 160

Ser Leu Arg Arg Leu Glu Ile Asn Met Lys Glu Ile Lys Glu Thr Leu
 165 170 175

Arg Gln Ser Leu Glu Ser Ser Ser Gly Lys Ser Pro Leu Glu Ile Ser
 180 185 190

Arg Phe Lys Val Lys Asn Val Lys Thr Gly Ser Ala Ser Gly Cys Asn
 195 200 205

Ser Glu Lys Ile Arg Lys Leu Val Ala Val Lys Arg Gln Gln Glu Pro
 210 215 220

Leu Gly Glu Asp Cys Pro Ser Glu Leu Arg Glu Ile Ile Asp Glu Cys
 225 230 235 240

Arg Ala His Asp Pro Ser Val Arg Pro Ser Val Asp Glu Ile Leu Lys
 245 250 255

Lys Leu Ser Thr Phe Ser Lys
260

<210> 3
<211> 472
<212> PRT
<213> Mus musculus

<400> 3

Met Asp Lys Leu Gly Gln Ile Ile Lys Leu Gly Gln Leu Ile Tyr Glu
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Gln Cys Glu Lys Met Lys Tyr Cys Arg Lys Gln Cys Gln Arg Leu Gly
20 25 30

Asn Arg Val His Gly Leu Leu Gln Pro Leu Gln Arg Leu Gln Ala Gln
35 40 45

Gly Lys Lys Asn Leu Pro Asp Asp Ile Thr Ala Ala Leu Gly Arg Phe
50 55 60

Asp Glu Val Leu Lys Glu Ala Asn Gln Gln Ile Glu Lys Phe Ser Lys
65 70 75 80

Lys Ser His Ile Trp Lys Phe Val Ser Val Gly Asn Asp Lys Ile Leu
85 90 95

Phe His Glu Val Asn Glu Lys Leu Arg Asp Val Trp Glu Glu Leu Leu
100 105 110

Leu Leu Leu Gln Val Tyr His Trp Asn Thr Val Ser Asp Val Ser Gln
115 120 125

Pro Ala Ser Trp Gln Gln Glu Asp Arg Gln Asp Ala Glu Glu Asp Gly
130 135 140

Asn Glu Asn Met Lys Val Ile Leu Met Gln Leu Gln Ile Ser Val Glu
145 150 155 160

Glu Ile Asn Lys Thr Leu Lys Gln Cys Ser Leu Lys Pro Thr Gln Glu
165 170 175

Ile Pro Gln Asp Leu Gln Ile Lys Glu Ile Pro Lys Glu His Leu Gly
180 185 190

Pro Pro Trp Thr Lys Leu Lys Thr Ser Lys Met Ser Thr Ile Tyr Arg
195 200 205

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

Gln Ala Glu Ser Val Gly Ile Val Arg Phe Thr Phe Asn Asp Glu Ile
225 230 235 240

Lys Thr Met Lys Lys Phe Asp Ser Pro Asn Ile Leu Arg Ile Phe Gly
245 250 255

Ile Cys Ile Asp Gln Thr Val Lys Pro Pro Glu Phe Ser Ile Val Met
260 265 270

Glu Tyr Cys Glu Leu Gly Thr Leu Arg Glu Leu Leu Asp Arg Glu Lys
275 280 285

Asp Leu Thr Met Ser Val Arg Ser Leu Leu Val Leu Arg Ala Ala Arg
290 295 300

Gly Leu Tyr Arg Leu His His Ser Glu Thr Leu His Arg Asn Ile Ser
305 310 315 320

Ser Ser Ser Phe Leu Val Ala Gly Gly Tyr Gln Val Lys Leu Ala Gly
325 330 335

Phe Glu Leu Ser Lys Thr Gln Asn Ser Ile Ser Arg Thr Ala Lys Ser
340 345 350

Thr Lys Ala Glu Arg Ser Ser Ser Thr Ile Tyr Val Ser Pro Glu Arg
355 360 365

Leu Lys Asn Pro Phe Cys Leu Tyr Asp Ile Lys Ala Glu Ile Tyr Ser
370 375 380

Phe Gly Ile Val Leu Trp Glu Ile Ala Thr Gly Lys Ile Pro Phe Glu
385 390 395 400

Gly Cys Asp Ser Lys Lys Ile Arg Glu Leu Val Ala Glu Asp Lys Lys
405 410 415

Gln Glu Pro Val Gly Gln Asp Cys Pro Glu Leu Leu Arg Glu Ile Ile
420 425 430

Asn Glu Cys Arg Ala His Glu Pro Ser Gln Arg Pro Ser Val Asp Gly
435 440 445

Arg Ser Leu Ser Gly Arg Glu Arg Ile Leu Glu Arg Leu Ser Ala Val
450 455 460

Glu Glu Ser Thr Asp Lys Lys Val
465 470

<210> 4
<211> 464
<212> PRT
<213> Mus musculus

<400> 4

Met Asp Lys Leu Gly Gln Ile Ile Lys Leu Gly Gln Leu Ile Tyr Glu
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Gln Cys Glu Lys Met Lys Tyr Cys Arg Lys Gln Cys Gln Arg Leu Gly
20 25 30

Asn Arg Val His Gly Leu Leu Gln Pro Leu Gln Arg Leu Gln Ala Gln
35 40 45

Gly Lys Lys Asn Leu Pro Asp Asp Ile Thr Ala Ala Leu Gly Arg Phe
50 55 60

Asp Glu Val Leu Lys Glu Ala Asn Gln Gln Ile Glu Lys Phe Ser Lys
65 70 75 80

Lys Ser His Ile Trp Lys Phe Val Ser Val Gly Asn Asp Lys Ile Leu
85 90 95

Phe His Glu Val Asn Glu Lys Leu Arg Asp Val Trp Glu Glu Leu Leu
100 105 110

Leu Leu Leu Gln Val Tyr His Trp Asn Thr Val Ser Asp Val Ser Gln
115 120 125

Pro Ala Ser Trp Gln Gln Glu Asp Arg Gln Asp Ala Glu Glu Asp Gly
130 135 140

Asn Glu Asn Met Lys Val Ile Leu Met Gln Leu Gln Ile Ser Val Glu
145 150 155 160

Glu Ile Asn Lys Thr Leu Lys Gln Cys Ser Leu Lys Pro Thr Gln Glu
165 170 175

Ile Pro Gln Asp Leu Gln Ile Lys Glu Ile Pro Lys Glu His Leu Gly
180 185 190

Pro Pro Trp Thr Lys Leu Lys Thr Ser Lys Met Ser Thr Ile Tyr Arg
195 200 205

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

Gln Ala Glu Ser Val Gly Ile Val Arg Phe Thr Phe Asn Asp Glu Ile
225 230 235 240

Lys Thr Met Lys Lys Phe Asp Ser Pro Asn Ile Leu Arg Ile Phe Gly
245 250 255

Ile Cys Ile Asp Gln Thr Val Lys Pro Pro Glu Phe Ser Ile Val Met
260 265 270

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Glu Tyr Cys Glu Leu Gly Thr Leu Arg Glu Leu Leu Asp Arg Glu Lys
275 280 285

Asp Leu Thr Met Ser Val Arg Ser Leu Leu Val Leu Arg Ala Ala Arg
290 295 300

Gly Leu Tyr Arg Leu His His Ser Glu Thr Leu His Arg Asn Ile Ser
305 310 315 320

Ser Ser Ser Phe Leu Val Ala Gly Gly Tyr Gln Val Lys Leu Ala Gly
325 330 335

Phe Glu Leu Ser Lys Thr Gln Asn Ser Ile Ser Arg Thr Ala Lys Ser
340 345 350

Thr Lys Ala Glu Arg Ser Ser Ser Thr Ile Tyr Val Ser Pro Glu Arg
355 360 365

Leu Lys Asn Pro Phe Cys Leu Tyr Asp Ile Lys Ala Glu Ile Tyr Ser
370 375 380

Phe Gly Ile Val Leu Trp Glu Ile Ala Thr Gly Lys Ile Pro Phe Glu
385 390 395 400

Gly Cys Asp Ser Lys Lys Ile Arg Glu Leu Val Ala Glu Asp Lys Lys
405 410 415

Gln Glu Pro Val Gly Gln Asp Cys Pro Glu Leu Leu Arg Glu Ile Ile
420 425 430

Asn Glu Cys Arg Ala His Glu Pro Ser Gln Arg Pro Ser Val Asp Gly
435 440 445

Ile Leu Glu Arg Leu Ser Ala Val Glu Glu Ser Thr Asp Lys Lys Val
450 455 460