

## SEQUENCE LISTING

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<120> GLUTAMATE OXALOACETATE TRANSAMINASE 1 (GOT1), PREPARATIONS AND  
 METHODS OF GENERATING SAME AND USES THEREOF

<130> 65360

<150> US 62/140,492  
 <151> 2015-03-31

<160> 5

<170> PatentIn version 3.5

<210> 1  
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Pro Glu Val Lys Pro Glu Thr His Ile Asn Leu Lys Val Ser Asp Gly  
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Ser Ser Glu Ile Phe Phe Lys Ile Lys Lys Thr Thr Pro Leu Arg Arg  
 35 40 45

Leu Met Glu Ala Phe Ala Lys Arg Gln Gly Lys Glu Met Asp Ser Leu  
 50 55 60

Arg Phe Leu Tyr Asp Gly Ile Arg Ile Gln Ala Asp Gln Thr Pro Glu  
 65 70 75 80

Asp Leu Asp Met Glu Asp Asn Asp Ile Ile Glu Ala His Arg Glu Gln  
 85 90 95

Ile Gly Gly Ala Pro Pro Ser Val Phe Ala Glu Val Pro Gln Ala Gln  
 100 105 110

Pro Val Leu Val Phe Lys Leu Thr Ala Asp Phe Arg Glu Asp Pro Asp  
 115 120 125

Pro Arg Lys Val Asn Leu Gly Val Gly Ala Tyr Arg Thr Asp Asp Cys  
 130 135 140

His Pro Trp Val Leu Pro Val Val Lys Lys Val Glu Gln Lys Ile Ala  
 145 150 155 160

Asn Asp Asn Ser Leu Asn His Glu Tyr Leu Pro Ile Leu Gly Leu Ala  
 165 170 175

Glu Phe Arg Ser Cys Ala Ser Arg Leu Ala Leu Gly Asp Asp Ser Pro  
 180 185 190

Ala Leu Lys Glu Lys Arg Val Gly Gly Val Gln Ser Leu Gly Gly Thr  
 195 200 205

Gly Ala Leu Arg Ile Gly Ala Asp Phe Leu Ala Arg Trp Tyr Asn Gly  
 210 215 220

Thr Asn Asn Lys Asn Thr Pro Val Tyr Val Ser Ser Pro Thr Trp Glu  
 225 230 235 240

Asn His Asn Ala Val Phe Ser Ala Ala Gly Phe Lys Asp Ile Arg Ser  
 245 250 255

Tyr Arg Tyr Trp Asp Ala Glu Lys Arg Gly Leu Asp Leu Gln Gly Phe  
 260 265 270

Leu Asn Asp Leu Glu Asn Ala Pro Glu Phe Ser Ile Val Val Leu His  
 275 280 285

Ala Cys Ala His Asn Pro Thr Gly Ile Asp Pro Thr Pro Glu Gln Trp  
 290 295 300

Lys Gln Ile Ala Ser Val Met Lys His Arg Phe Leu Phe Pro Phe Phe  
 305 310 315 320

Asp Ser Ala Tyr Gln Gly Phe Ala Ser Gly Asn Leu Glu Arg Asp Ala  
 325 330 335

Trp Ala Ile Arg Tyr Phe Val Ser Glu Gly Phe Glu Phe Phe Cys Ala  
 340 345 350

Gln Ser Phe Ser Lys Asn Phe Gly Leu Tyr Asn Glu Arg Val Gly Asn  
 355 360 365

Leu Thr Val Val Gly Lys Glu Pro Glu Ser Ile Leu Gln Val Leu Ser  
 370 375 380

Gln Met Glu Lys Ile Val Arg Ile Thr Trp Ser Asn Pro Pro Ala Gln  
 385 390 395 400

Gly Ala Arg Ile Val Ala Ser Thr Leu Ser Asn Pro Glu Leu Phe Glu  
 405 410 415

Glu Trp Thr Gly Asn Val Lys Thr Met Ala Asp Arg Ile Leu Thr Met  
 420 425 430

Arg Ser Glu Leu Arg Ala Arg Leu Glu Ala Leu Lys Thr Pro Gly Thr  
435 440 445

Trp Asn His Ile Thr Asp Gln Ile Gly Met Phe Ser Phe Thr Gly Leu  
450 455 460

Asn Pro Lys Gln Val Glu Tyr Leu Val Asn Glu Lys His Ile Tyr Leu  
465 470 475 480

Leu Pro Ser Gly Arg Ile Asn Val Ser Gly Leu Thr Thr Lys Asn Leu  
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Asp Tyr Val Ala Thr Ser Ile His Glu Ala Val Thr Lys Ile Gln  
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Val Phe Lys Leu Thr Ala Asp Phe Arg Glu Asp Pro Asp Pro Arg Lys  
20 25 30

Val Asn Leu Gly Val Gly Ala Tyr Arg Thr Asp Asp Cys His Pro Trp  
35 40 45

Val Leu Pro Val Val Lys Lys Val Glu Gln Lys Ile Ala Asn Asp Asn  
50 55 60

Ser Leu Asn His Glu Tyr Leu Pro Ile Leu Gly Leu Ala Glu Phe Arg  
65 70 75 80

Ser Cys Ala Ser Arg Leu Ala Leu Gly Asp Asp Ser Pro Ala Leu Lys  
85 90 95

Glu Lys Arg Val Gly Gly Val Gln Ser Leu Gly Gly Thr Gly Ala Leu  
100 105 110

Arg Ile Gly Ala Asp Phe Leu Ala Arg Trp Tyr Asn Gly Thr Asn Asn  
115 120 125

Lys Asn Thr Pro Val Tyr Val Ser Ser Pro Thr Trp Glu Asn His Asn  
130 135 140

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

Trp Asp Ala Glu Lys Arg Gly Leu Asp Leu Gln Gly Phe Leu Asn Asp  
 165 170 175

Leu Glu Asn Ala Pro Glu Phe Ser Ile Val Val Leu His Ala Cys Ala  
 180 185 190

His Asn Pro Thr Gly Ile Asp Pro Thr Pro Glu Gln Trp Lys Gln Ile  
 195 200 205

Ala Ser Val Met Lys His Arg Phe Leu Phe Pro Phe Phe Asp Ser Ala  
 210 215 220

Tyr Gln Gly Phe Ala Ser Gly Asn Leu Glu Arg Asp Ala Trp Ala Ile  
 225 230 235 240

Arg Tyr Phe Val Ser Glu Gly Phe Glu Phe Phe Cys Ala Gln Ser Phe  
 245 250 255

Ser Lys Asn Phe Gly Leu Tyr Asn Glu Arg Val Gly Asn Leu Thr Val  
 260 265 270

Val Gly Lys Glu Pro Glu Ser Ile Leu Gln Val Leu Ser Gln Met Glu  
 275 280 285

Lys Ile Val Arg Ile Thr Trp Ser Asn Pro Pro Ala Gln Gly Ala Arg  
 290 295 300

Ile Val Ala Ser Thr Leu Ser Asn Pro Glu Leu Phe Glu Glu Trp Thr  
 305 310 315 320

Gly Asn Val Lys Thr Met Ala Asp Arg Ile Leu Thr Met Arg Ser Glu  
 325 330 335

Leu Arg Ala Arg Leu Glu Ala Leu Lys Thr Pro Gly Thr Trp Asn His  
 340 345 350

Ile Thr Asp Gln Ile Gly Met Phe Ser Phe Thr Gly Leu Asn Pro Lys  
 355 360 365

Gln Val Glu Tyr Leu Val Asn Glu Lys His Ile Tyr Leu Leu Pro Ser  
 370 375 380

Gly Arg Ile Asn Val Ser Gly Leu Thr Thr Lys Asn Leu Asp Tyr Val  
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Ala Thr Ser Ile His Glu Ala Val Thr Lys Ile Gln  
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aagaccactc cttaagaag gctgatggaa gcgttcgcta aaagacaggg taaggaaatg 180  
gactccttaa gattcttgta cgacggtatt agaattcaag ctgatcagac ccctgaagat 240  
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tatcgacagg atgactgcca tccctgggtt ttgccagtag tgaagaaagt ggagcagaa 180  
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20 25 30

Ser Ser Glu Ile Phe Phe Lys Ile Lys Lys Thr Thr Pro Leu Arg Arg  
35 40 45

Leu Met Glu Ala Phe Ala Lys Arg Gln Gly Lys Glu Met Asp Ser Leu  
50 55 60

Arg Phe Leu Tyr Asp Gly Ile Arg Ile Gln Ala Asp Gln Thr Pro Glu  
65 70 75 80

Asp Leu Asp Met Glu Asp Asn Asp Ile Ile Glu Ala His Arg Glu Gln  
85 90 95

Ile Gly Gly