

<110> CJ CheilJedang Corporation

<120> NOVEL GLUTAMINE-HYDROLYZING GMP SYNTHASE VARIANT AND METHOD FOR PRODUCING PURINE NUCLEOTIDE BY USING SAME

<130> OPA21333

<150> KR 10-2021-0125841

<151> 2021-09-23

<160> 51

<170> KoPatentIn 3.0

<210> 1

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<212> PRT

<213> Artificial Sequence

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<223> guaA_R29C

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35 40 45

Ala Lys Asn Pro Ala Ala Leu Ile Leu Ser Gly Gly Pro Ser Ser Val
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Tyr Ala Asp Gly Ala Pro Gln Leu Lys Pro Glu Leu Leu Glu Leu Gly
65 70 75 80

Val Pro Val Phe Gly Ile Cys Tyr Gly Phe Gln Ala Met Asn His Ala
85 90 95

Leu Gly Gly Asn Val Ala Gln Thr Gly Asp Arg Glu Tyr Gly Arg Thr
100 105 110

Glu Ile Thr His Thr Gly Gly Val Leu His Asp Gly Leu Glu Glu Asn
115 120 125

His Lys Val Trp Met Ser His Gly Asp Ala Val Asp Lys Ala Pro Glu
130 135 140

Gly Phe Thr Val Thr Ala Ser Ser Ala Gly Ala Pro Val Ala Ala Met
145 150 155 160

Glu	Cys	Val	Ala	Lys	Gln	Met	Ala	Gly	Val	Gln	Tyr	His	Pro	Glu	Val			
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Val	Ala	Gly	Leu	Glu	Gln	Thr	Trp	Thr	Ser	Ala	Asn	Ile	Ala	Gln	Gln			
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Cys	Gly	Leu	Ser	Gly	Gly	Val	Asp	Ser	Ala	Val	Ala	Ala	Ala	Leu	Val			
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Phe	Pro	Gly	Pro	Gly	Leu	Gly	Ile	Arg	Ile	Ile	Gly	Glu	Val	Thr	Glu			
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 Tyr Gly His Pro Ile Val Leu Arg Pro Val Ser Ser Glu Asp Ala Met
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 Thr Ala Asp Trp Thr Arg Val Pro Tyr Asp Val Leu Glu Lys Ile Ser
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 Thr Arg Ile Thr Asn Glu Val Asn Asp Val Asn Arg Val Val Val Asp
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 aaggcacctg agggctttac cgtgaccgca tcgtcggctg gtgcgccggt tgcagcgatg 480
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 ggccgcgcta tttgtggcct gtcgggcggc gtggactccg cagtcgctgc agcgctcgtg 720
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35 40 45
Ala Lys Asn Pro Ala Ala Leu Ile Leu Ser Gly Gly Pro Ser Ser Val
50 55 60
Tyr Ala Asp Gly Ala Pro Gln Leu Lys Pro Glu Leu Leu Glu Leu Gly
65 70 75 80
Val Pro Val Phe Gly Ile Cys Tyr Gly Phe Gln Ala Met Asn His Ala
85 90 95

Leu Gly Gly Asn Val Ala Gln Thr Gly Asp Arg Glu Tyr Gly Arg Thr
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 Glu Ile Thr His Thr Gly Gly Val Leu His Asp Gly Leu Glu Glu Asn
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 His Lys Val Trp Met Ser His Gly Asp Ala Val Asp Lys Ala Pro Glu
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 Gly Phe Thr Val Thr Ala Ser Ser Ala Gly Ala Pro Val Ala Ala Met
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 Glu Cys Val Ala Lys Gln Met Ala Gly Val Gln Tyr His Pro Glu Val
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 Met His Ser Pro His Gly Gln Glu Val Leu Val Arg Phe Leu Thr Glu
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 Val Ala Gly Leu Glu Gln Thr Trp Thr Ser Ala Asn Ile Ala Gln Gln
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 Leu Ile Asp Asp Val Arg Ala Gln Ile Gly Pro Glu Gly Arg Ala Ile
 210 215 220
 Cys Gly Leu Ser Gly Gly Val Asp Ser Ala Val Ala Ala Ala Leu Val
 225 230 235 240
 Gln Arg Ala Ile Gly Asp Arg Leu Thr Cys Val Phe Val Asp His Gly
 245 250 255
 Leu Leu Arg Ala Gly Glu Arg Glu Gln Val Glu Lys Asp Phe Val Ala
 260 265 270
 Ser Thr Gly Ala Lys Leu Ile Thr Ala His Glu Ala Asp Ala Phe Leu
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 Ser Lys Leu Ala Gly Val Thr Asp Pro Glu Ala Lys Arg Lys Ala Ile
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 Gly Ala Glu Phe Ile Arg Ser Phe Glu Arg Ala Val Ala Gln Ala Leu
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 Glu Glu Ser Pro Glu Asp Ser Thr Val Asp Phe Leu Val Gln Gly Thr
 325 330 335
 Leu Tyr Pro Asp Val Val Glu Ser Gly Gly Gly Asp Gly Thr Ala Asn
 340 345 350
 Ile Lys Ser His His Asn Val Gly Gly Leu Pro Asp Asp Val Glu Phe
 355 360 365
 Glu Leu Val Glu Pro Leu Arg Leu Leu Phe Lys Asp Glu Val Arg Ala
 370 375 380

Val Gly Arg Glu Leu Gly Leu Pro Glu Glu Ile Val Ala Arg Gln Pro
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 Phe Pro Gly Pro Gly Leu Gly Ile Arg Ile Ile Gly Glu Val Thr Glu
 405 410 415
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 Tyr Gly His Pro Ile Val Leu Arg Pro Val Ser Ser Glu Asp Ala Met
 465 470 475 480
 Thr Ala Asp Trp Thr Arg Val Pro Tyr Asp Val Leu Glu Lys Ile Ser
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