

2. Sequencing listing

<110> CJ CheilJedang Corporation
 <120> Novel inosine-5'-monophosphate dehydrogenase and method for producing 5'-inosine monophosphate using the same
 <130> OPA18245
 <150> 10-2018-0087597
 <151> 2018-07-27
 <160> 26
 <170> KoPatentIn 3.0
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 gtcttgacc gcaacttgct ctcgcaagag caggcggagc aggtcgaaat cgtcaagcgc 300
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 aacaagctgg tcggtctgat taccgttaaa gactttgtta agaccgaaca gttcccgaat 660
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2. Sequencing listing

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 Ser Asn Val Val Pro Ser Glu Val Asp Thr Ser Ala Gln Phe Thr Arg
 35 40 45
 Asn Thr Arg Leu Gly Ile Pro Leu Ala Ser Ala Ala Met Asp Thr Val
 50 55 60
 Thr Glu Ala Arg Met Ala Ile Ala Met Ala Arg Gln Gly Gly Ile Gly
 65 70 75 80
 Val Leu His Arg Asn Leu Ser Ser Gln Glu Gln Ala Glu Gln Val Glu
 85 90 95
 Ile Val Lys Arg Ser Glu Ser Gly Met Val Thr Asp Pro Val Thr Ala
 100 105 110
 Asn Pro Asp Met Thr Ile Gln Glu Val Asp Asp Leu Cys Ala Arg Phe
 115 120 125
 Arg Ile Ser Gly Leu Pro Val Val Asn Glu Asp Gly Thr Leu Leu Gly
 130 135 140
 Ile Cys Thr Asn Arg Asp Met Arg Phe Glu Arg Asp Tyr Ser Arg Lys
 145 150 155 160
 Val Ser Asp Ile Met Thr Ala Met Pro Leu Val Val Ala Lys Glu Gly
 165 170 175
 Val Ser Lys Glu Glu Ala Leu Asp Leu Leu Ser Thr Asn Lys Val Glu
 180 185 190
 Lys Leu Pro Ile Val Asp Lys Asn Asn Lys Leu Val Gly Leu Ile Thr
 195 200 205
 Val Lys Asp Phe Val Lys Thr Glu Gln Phe Pro Asn Ser Ser Lys Asp
 210 215 220
 Ala Ser Gly Arg Leu Leu Val Ala Ala Gly Ile Gly Thr Gly Glu Glu
 225 230 235 240
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2. Sequencing listing

260
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 305 310 315 320
 Val Val Ala Gly Val Gly Ala Pro Gln Ile Thr Ala Ile Met Glu Ala
 325 330 335
 Ala Thr Val Ala Ser Ala Ala Gly Val Pro Leu Ile Ala Asp Gly Gly
 340 345 350
 Met Gln Tyr Ser Gly Asp Val Ala Lys Ala Leu Ala Ala Gly Ala Asp
 355 360 365
 Ser Val Met Leu Gly Ser Met Phe Ala Gly Thr Leu Glu Ala Pro Gly
 370 375 380
 Asp Ile Val Ile Val Gly Gly Lys Gln Tyr Lys Arg Tyr Arg Gly Met
 385 390 395 400
 Gly Ser Met Gly Ala Met Gln Gly Arg Gly Leu Ser Gly Glu Lys Arg
 405 410 415
 Ser Tyr Ser Lys Asp Arg Tyr Phe Gln Ala Asp Val Arg Ser Glu Asp
 420 425 430
 Lys Leu Val Pro Glu Gly Val Glu Gly Lys Val Pro Tyr Arg Gly Glu
 435 440 445
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 450 455 460
 Gly Tyr Thr Gly Ser Ala Thr Ile Glu Glu Leu Lys Thr Lys Gln Phe
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2. Sequencing listing

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gtttctgaca tcatgaccgc tatgccgctg gttgtggcaa aagaaggcgt cagcaaggaa	540
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2. Sequencing listing

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2. Sequencing listing

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cgcgcggaac tgggctacac tggctccgct actattgaag agctgaagac caagcagttc     1440
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          35          40          45
Asn Thr Arg Leu Gly Ile Pro Leu Ala Ser Ala Ala Met Asp Thr Val
          50          55          60
Thr Glu Ala Arg Met Ala Ile Ala Met Ala Arg Gln Gly Gly Ile Gly
          65          70          75          80
Val Leu His Arg Asn Leu Ser Ser Gln Glu Gln Ala Glu Gln Val Glu
          85          90          95
Ile Val Lys Arg Ser Glu Ser Gly Met Val Thr Asp Pro Val Thr Ala
          100          105          110
Asn Pro Asp Met Thr Ile Gln Glu Val Asp Asp Leu Cys Ala Arg Phe
          115          120          125
Arg Ile Ser Gly Leu Pro Val Val Asn Glu Asp Gly Thr Leu Leu Gly

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140

Ile 145	Cys	Thr	Asn	Arg	Asp 150	Met	Arg	Phe	Glu	Arg 155	Asp	Tyr	Ser	Arg	Lys 160
Val	Ser	Asp	Ile	Met 165	Thr	Ala	Met	Pro	Leu 170	Val	Val	Ala	Lys	Glu 175	Gly
Val	Ser	Lys	Glu 180	Glu	Ala	Leu	Asp	Leu 185	Leu	Ser	Thr	Asn	Lys 190	Val	Glu
Lys	Leu	Pro 195	Ile	Val	Asp	Lys	Asn 200	Asn	Lys	Leu	Val	Gly 205	Leu	Ile	Thr
Val	Lys 210	Asp	Phe	Val	Lys	Thr 215	Glu	Gln	Phe	Pro	Asn 220	Ser	Ser	Lys	Asp
Ala 225	Ser	Gly	Arg	Leu	Leu 230	Val	Ala	Ala	Gly	Ile 235	Gly	Thr	Gly	Glu	Glu 240
Ser	Tyr	Glu	Arg	Ala 245	Gly	Leu	Leu	Val	Asp 250	Ala	Gly	Val	Asp	Val 255	Leu
Ile	Val	Asp	Ser 260	Ala	His	Ala	His	Asn 265	Asn	Arg	Val	Leu	Glu 270	Met	Val
Ser	Arg	Val 275	Lys	Asn	Asp	Phe	Gly 280	Ser	Lys	Ile	Asp	Val 285	Val	Gly	Gly
Asn	Leu 290	Ala	Thr	Arg	Ser	Ala 295	Ala	Lys	Ala	Met	Ile 300	Glu	Ala	Gly	Ala
Asp 305	Ala	Ile	Lys	Val	Gly 310	Ile	Gly	Pro	Gly	Ser 315	Ile	Cys	Thr	Thr	Arg 320
Val	Val	Ala	Gly	Val 325	Gly	Ala	Pro	Gln	Ile 330	Thr	Ala	Ile	Met	Glu 335	Ala
Ala	Thr	Val	Ala 340	Ser	Ala	Ala	Gly	Val 345	Pro	Leu	Ile	Ala	Asp 350	Gly	Gly
Met	Gln	Tyr 355	Ser	Gly	Asp	Val	Ala 360	Lys	Ala	Leu	Ala	Ala 365	Gly	Ala	Asp
Ser	Val 370	Met	Leu	Gly	Ser	Met 375	Phe	Thr	Gly	Thr	Leu 380	Glu	Ala	Pro	Gly
Asp 385	Ile	Val	Ile	Val	Gly 390	Gly	Lys	Gln	Tyr	Lys 395	Arg	Tyr	Arg	Gly	Met 400
Gly	Ser	Met	Gly	Ala 405	Met	Gln	Gly	Arg	Gly 410	Leu	Ser	Gly	Glu	Lys 415	Arg
Ser	Tyr	Ser	Lys 420	Asp	Arg	Tyr	Phe	Gln 425	Ala	Asp	Val	Arg	Ser 430	Glu	Asp
Lys	Leu	Val 435	Pro	Glu	Gly	Val	Glu 440	Gly	Lys	Val	Pro	Tyr 445	Arg	Gly	Glu
Ile	Gly 450	Gln	Ile	Thr	His	Gln 455	Ile	Val	Gly	Gly	Leu 460	Arg	Ala	Ala	Met
Gly 465	Tyr	Thr	Gly	Ser	Ala 470	Thr	Ile	Glu	Glu	Leu 475	Lys	Thr	Lys	Gln	Phe 480
Val	Arg	Ile	Thr	Thr 485	Ala	Gly	Leu	Ala	Glu 490	Ser	His	Pro	His	His 495	Leu

2. Sequencing listing

Gln Gln Thr Val Glu Ala Pro Asn Tyr Arg
500 505

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20 25 30
Ser Asn Val Val Pro Ser Glu Val Asp Thr Ser Ala Gln Phe Thr Arg
35 40 45
Asn Thr Arg Leu Gly Ile Pro Leu Ala Ser Ala Ala Met Asp Thr Val
50 55 60
Thr Glu Ala Arg Met Ala Ile Ala Met Ala Arg Gln Gly Gly Ile Gly
65 70 75 80
Val Leu His Arg Asn Leu Ser Ser Gln Glu Gln Ala Glu Gln Val Glu
85 90 95
Ile Val Lys Arg Ser Glu Ser Gly Met Val Thr Asp Pro Val Thr Ala
100 105 110
Asn Pro Asp Met Thr Ile Gln Glu Val Asp Asp Leu Cys Ala Arg Phe
115 120 125
Arg Ile Ser Gly Leu Pro Val Val Asn Glu Asp Gly Thr Leu Leu Gly
130 135 140
Ile Cys Thr Asn Arg Asp Met Arg Phe Glu Arg Asp Tyr Ser Arg Lys
145 150 155 160
Val Ser Asp Ile Met Thr Ala Met Pro Leu Val Val Ala Lys Glu Gly
165 170 175
Val Ser Lys Glu Glu Ala Leu Asp Leu Leu Ser Thr Asn Lys Val Glu
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Lys Leu Pro Ile Val Asp Lys Asn Asn Lys Leu Val Gly Leu Ile Thr
195 200 205
Val Lys Asp Phe Val Lys Thr Glu Gln Phe Pro Asn Ser Ser Lys Asp
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Ala Ser Gly Arg Leu Leu Val Ala Ala Gly Ile Gly Thr Gly Glu Glu
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Ser Tyr Glu Arg Ala Gly Leu Leu Val Asp Ala Gly Val Asp Val Leu
245 250 255
Ile Val Asp Ser Ala His Ala His Asn Asn Arg Val Leu Glu Met Val
260 265 270
Ser Arg Val Lys Asn Asp Phe Gly Ser Lys Ile Asp Val Val Gly Gly
275 280 285

2. Sequencing listing

Asn₂₉₀ Leu Ala Thr Arg Ser Ala₂₉₅ Ala Lys Ala Met Ile₃₀₀ Glu Ala Gly Ala
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 Met Gln Tyr₃₅₅ Ser Gly Asp Val Ala₃₆₀ Lys Ala Leu Ala Ala₃₆₅ Gly Ala Asp
 Ser Val₃₇₀ Met Leu Gly Ser Met₃₇₅ Phe Ala Gly Thr Leu₃₈₀ Glu Ala Pro Gly
 Asp₃₈₅ Ile Val Ile Val Gly₃₉₀ Gly Lys Gln Tyr Lys₃₉₅ Arg Tyr Arg Gly Met₄₀₀
 Gly Ser Met Gly Ala₄₀₅ Met Gln Gly Arg Gly₄₁₀ Leu Ser Gly Glu Lys Arg₄₁₅
 Ser Tyr Ser Lys₄₂₀ Asp Arg Tyr Phe Gln₄₂₅ Ala Asp Val Arg Ser₄₃₀ Glu Asp
 Lys Leu Val₄₃₅ Pro Glu Gly Val Glu₄₄₀ Gly Lys Val Pro Tyr₄₄₅ Arg Gly Glu
 Ile Gly₄₅₀ Gln Ile Thr His Gln₄₅₅ Ile Val Gly Gly Leu₄₆₀ Arg Ala Ala Met
 Gly Tyr Thr Gly Ser Ala₄₇₀ Thr Ile Glu Glu Leu₄₇₅ Lys Thr Lys Gln Phe₄₈₀
 Val Arg Ile Thr Thr₄₈₅ Ala Gly Leu Ala Glu₄₉₀ Ser His Pro His His₄₉₅ Leu
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 Ser Asn Val₃₅ Val Pro Ser Glu Val₄₀ Asp Thr Ser Ala Gln₄₅ Phe Thr Arg
 Asn Thr₅₀ Arg Leu Gly Ile Pro₅₅ Leu Ala Ser Ala Ala₆₀ Met Asp Thr Val
 Thr₆₅ Glu Ala Arg Met Ala₇₀ Ile Ala Met Ala Arg₇₅ Gln Gly Gly Ile Gly₈₀

2. Sequencing listing

Val	Leu	His	Arg	Asn ₈₅	Leu	Ser	Ser	Gln	Glu ₉₀	Gln	Ala	Glu	Gln	Val ₉₅	Glu	
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Asn	Pro	Asp ₁₁₅	Met	Thr	Ile	Gln	Glu ₁₂₀	Val	Asp	Asp	Leu	Cys ₁₂₅	Ala	Arg	Phe	
Arg	Ile ₁₃₀	Ser	Gly	Leu	Pro	Val ₁₃₅	Val	Asn	Glu	Asp	Gly ₁₄₀	Thr	Leu	Leu	Gly	
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Val	Ser	Asp	Ile	Met ₁₆₅	Thr	Ala	Met	Pro	Leu ₁₇₀	Val	Val	Ala	Lys	Glu ₁₇₅	Gly	
Val	Ser	Lys	Glu ₁₈₀	Glu	Ala	Leu	Asp	Leu ₁₈₅	Leu	Ser	Thr	Asn	Lys ₁₉₀	Val	Glu	
Lys	Leu	Pro ₁₉₅	Ile	Val	Asp	Lys	Asn ₂₀₀	Asn	Lys	Leu	Val	Gly ₂₀₅	Leu	Ile	Thr	
Val	Lys ₂₁₀	Asp	Phe	Val	Lys	Thr ₂₁₅	Glu	Gln	Phe	Pro	Asn ₂₂₀	Ser	Ser	Lys	Asp	
Ala ₂₂₅	Ser	Gly	Arg	Leu	Leu ₂₃₀	Val	Ala	Ala	Gly	Ile ₂₃₅	Gly	Thr	Gly	Glu	Glu ₂₄₀	
Ser	Tyr	Glu	Arg	Ala ₂₄₅	Gly	Leu	Leu	Val	Asp ₂₅₀	Ala	Gly	Val	Asp	Val ₂₅₅	Leu	
Ile	Val	Asp	Ser ₂₆₀	Ala	His	Ala	His	Asn ₂₆₅	Asn	Arg	Val	Leu	Glu ₂₇₀	Met	Val	
Ser	Arg	Val ₂₇₅	Lys	Asn	Asp	Phe	Gly ₂₈₀	Ser	Lys	Ile	Asp	Val ₂₈₅	Val	Gly	Gly	
Asn	Leu ₂₉₀	Ala	Thr	Arg	Ser	Ala ₂₉₅	Ala	Lys	Ala	Met	Ile ₃₀₀	Glu	Ala	Gly	Ala	
Asp ₃₀₅	Ala	Ile	Lys	Val	Gly ₃₁₀	Ile	Gly	Pro	Gly	Ser ₃₁₅	Ile	Cys	Thr	Thr	Arg ₃₂₀	
Val	Val	Ala	Gly	Val ₃₂₅	Gly	Ala	Pro	Gln	Ile ₃₃₀	Thr	Ala	Ile	Met	Glu ₃₃₅	Ala	
Ala	Thr	Val	Ala ₃₄₀	Ser	Ala	Ala	Gly	Val ₃₄₅	Pro	Leu	Ile	Ala	Asp ₃₅₀	Gly	Gly	
Met	Gln	Tyr ₃₅₅	Ser	Gly	Asp	Val	Ala ₃₆₀	Lys	Ala	Leu	Ala	Ala ₃₆₅	Gly	Ala	Asp	
Ser	Val ₃₇₀	Met	Leu	Gly	Ser	Met ₃₇₅	Phe	Thr	Gly	Thr	Leu ₃₈₀	Glu	Ala	Pro	Gly	
Asp ₃₈₅	Ile	Val	Ile	Val	Gly ₃₉₀	Gly	Lys	Gln	Tyr	Lys ₃₉₅	Arg	Tyr	Arg	Gly	Met ₄₀₀	
Gly	Ser	Met	Gly	Ala ₄₀₅	Met	Gln	Gly	Arg	Gly ₄₁₀	Leu	Ser	Gly	Glu	Lys ₄₁₅	Arg	
Ser	Tyr	Ser	Lys ₄₂₀	Asp	Arg	Tyr	Phe	Gln ₄₂₅	Ala	Asp	Val	Arg	Ser	Glu	Asp	
Lys	Leu	Val ₄₃₅	Pro	Glu	Gly	Val	Glu ₄₄₀	Gly	Lys	Val	Pro	Tyr ₄₄₅	Arg	Gly	Glu	

2. Sequencing listing

Ile Gly Gln Ile Thr His Gln Ile Val Gly Gly Leu Arg Ala Ala Met
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 Gly Tyr Thr Gly Ser Ala Thr Ile Glu Glu Leu Lys Thr Lys Gln Phe
 465 470 475 480
 Val Arg Ile Thr Thr Ala Gly Leu Ala Glu Ser His Pro His His Leu
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2. Sequencing listing

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2. Sequencing listing

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