

Nucleotide sequence of the *glpR* gene encoding the repressor for the glycerol-3-phosphate regulon of *Escherichia coli* K12

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The *glpR* gene, which codes for the repressor of the glycerol-3-phosphate regulon, was cloned from the genomic library λ phage E5B5 of *E. coli* (1).

EcoRI **glpD** ←
GATTCATAGTCTCAAAGTAGCGCAGCCGACCGTGAATGAGTTTGAAGTGGCGGAAGAGGTCCGCGCAAGCGAGATCTCGCCCTCCAGCATCAGCAGC 100
GATAAACCCGCTCCACGGGCTCTGCGCGATACCAGCACCATTTGTCGGCGCCCTATACACATLACAGATCTTTGGTTTCCATGCTGCCCTCATTCATCTTT 200
CGTTAAAGCTCATAAATGCTGCTTATCGAACATACTAGCAAGAAATCGCGCTTAGCTAACATLGAAGAAACATTTAGAGTGATATGATATAACATTATG 300
GGCTTTATCTGCCCGCTCGAAGTAAACTGTGGGTAATTTGCCACTGTGTTTGTAAAGAAAGAGAGACGCATGGATCAGTTCGAAATGATTAACGTTGC 400
glpE → M D Q F E C I N V A
CGACGCGACCAGAAGTTGCAGGAAAAAGGCGCGTCTGGTGCATATTCGCGATCCACAGAGTTTCGCAATGGGACATGGCGTCCAGGCTTCCATTTA 500
DAHQKLEKEEAVLVDIRDPQSFAMGHAHVQAQFHL
ACCAACGACAGCTGGCGCTTTATGCGGTATAACGACTTTGACACTCGCGTATGGTGATGTGTTATCACGGCAATAGCAGAAAGGCGGGCGCAGT 600
TNDTLGLGAFMRDNDFFDTPVMVMCYHGNSSKGAAGAQ
ATCTGCTCAACAGGCTACGATGCTATAGCAATTTGACGCGCGTTTGAAGCTGGCAACGCTCAGTTCGCCGACAGGTTCGCGGATACGCGCGTAAGCC 700
LLQGGYD V V Y S I D G G F E A W Q R Q F P A E V A Y G R N A
TTTATCTGTCGCCCTTTGTGTGAAATAAGCGACAGCAACGATTTGATGATTACCTCTTTTGTCTAACCCCGCGTGGCGCAGCGCTTGTGATTACAT 800
LYCPLLCGISDSDNDVDDYLFCA**
glpG → M L M I T S F A N P R V A Q A F V D Y M
GGGACGCGAGGCTGTTATCCTCAGCATCAACAACATAACCAAGCGATGTCTGGCTGCCGATGAGTCCAGCGCGAGCGCTACCGCGCGGACGGCGG 900
ATQGVILTFIVLQHQNSDQWLADESEQAERVRADVA
CGTTTCTGAAAACCGCGCAGATCCGGTTATCTGGCGCGGAGCTGGCAGCGCCATACCGGCACTGGCTGCAATATCCGCGTTATCTTCTCTTTC 1000
R.F.L.E.N.P.A.D.P.P.R.Y.L.A.A.S.W.Q.A.G.H.T.G.S.G.L.H.Y.R.R.Y.P.F.F.A
CCGCTCGGTGAACCGCAGGTCCGGTAACTCGGGTGATGATGATCGCTCGCTGGTGGTGTATTTGOCATGCAAAATCTCGCGCATCAGGAAGTGAT 1100
A.L.R.E.R.A.G.P.V.T.W.V.M.M.I.A.C.V.V.V.F.I.A.M.Q.I.L.G.D.Q.E.V.M
GTTATGGCTGGCTGGCCATTCGATCCAACGAAATTTGAGTTCGCGGCTTACTTCACCCAGCGTAAATGCACTTCGCGTATGCAATCCCTCTT 1200
L.W.L.A.W.P.F.D.P.T.L.K.K.F.E.F.W.R.Y.F.T.H.A.L.M.H.F.S.L.M.H.I.L.F
AACTGCTCTGGTGGTATCTCGCGCTGGCGGAAAAACGCTCGGTAAGCTAATGTGCTATTCGATCAGTCCAGCCGCTGTTAAGCGGCT 1300
N.L.L.W.W.V.Y.L.G.G.A.V.E.K.R.L.G.S.G.K.L.I.V.I.R.S.I.S.A.L.L.S.G.Y
ATGTGCAGCAAAAATCACCGCGCGTGGTTTGGCGGCTTCTGGCGTGTGTATCGCGTATGGCGCTACGCTCGCTACGTCGCGCAAGCGGATCCGCA 1400
V.Q.R.F.T.G.P.W.F.G.L.S.G.V.V.Y.A.L.M.G.Y.V.W.L.R.G.E.R.D.P.Q
AAGTGGCATTACCTGCAACGCTGGTAAATTAICTTGGCGCTGATCTGGATTTGCGCGGATGGTTGATTTGTTGGGATTCGAGTCCGCAAGCGGACA 1500
S.G.I.Y.L.Q.R.G.L.I.F.A.L.I.W.I.V.A.G.W.F.D.L.F.G.M.S.M.G.A
CACATCGCGCGGTTAGCGTGGTTACCGATGGCTTTTGTGATTCGCTCAATCGCGGAAAAACGAAAAATATCCAGGATTTATAAATGAACAACA 1600
H.I.A.G.L.A.V.G.L.A.M.A.F.V.D.S.L.N.A.R.K.R.K**
CAACGTCACAAAGGATATTATCGAACTGGTTAAACAGCAGGTTATGTCAAGTCCGAAAGAGCTGGTAGAGATTTCTCCGTCAGCCCGCAGACTATTCGCC 1700
GGCACTCAATGAGCTGGCGGAGCAAAAACGCTGATCTCGCGCATCATGGCGGTGGCGGCTCGCTCCAGTTCCGTTAACACCGCGTGGCAGATGCGCAA 1800
GGCCACCCAGACCGAAGAAAGAGCGCATTCGCGCGCAAAATGGCGGAGCAAAATCCCCAAATGGCTCGACCTGTTATCGATATCGGCACCAACCGCGGAA 1900
glpR → M A R R R C L S I A P R R K
CGCGTACGAGCACTCTCAATCACACAAATTTGCGCATGTCAACAACTCTCAACGTTGCTAACAGTTGATGCTAAAAGAAGATTTTCGATCATT 2000
RYDALLNLNHSNLRIVTNNLNVANTLWVKEDEFRII
CTCGCGGTGGCGAATTAAGCAGCGCGCATGGCGATCATTTGGGGAACGAGCGCTCGATTTTATCTCCAGTTCGCGGTTGATTTCCGATTTCTGGGA 2100
LAGGLELRSRHRGRLSRLANGRSILSPSSSAAVDFGLILGI
TAAGCGCATGATAGCGACCTGGCTGGTGGATTCGATACCAAGAGTTTCGCACCAACGCGCGCATTATGAGAATCTCGCGCAGTTATGCTGGT 2200
SGIDSDGSLLEFDYHEVVRTKRAIIENSRHVMVLV
FGTCGACTCGAAATTTGGCGTAACCGGATGGTCAATATGGCGAGCATCAGCATGGTAGTGGCTACACAGCGCGCGCGCGCAGTAAGCGT 2300
VDHSKFFACRNAMVNMGSISMVDAVYTDAAAASKR
GATGCAAGTCTGACGACCAACATTTCAACTGGAGCTGTGATCTGCACGCTTCCAGCTCAGACCAAAAGCGCGCAGTATTTGCGTCAAGCA 2400
DAGADGPPYSTGAVLILHGFPRQTKTRQVFASAMT
TGCGGCTATTGACGCTGGCTTTGOCCTGGCGGAAAGCTCAAAAAGCTGGCGTCCGCTGGCGGAAAGCGACTTTGCTGGCGGACAGTAGCGATAAG 2500
RVIDAAGFALARNVKKLASGCGKRLCLAAASDNDV
GTTCAGTTGCATACGTCGAGAGATGATGTTTTCTGCTCTGGCGCACAAACCGCTAAGCGCGGAGGGGGCGCTCTCTGCCAGTATAGCCGAG 2600
FQLHTVEIEIDVTFGLCAHERRKRGGAGALLPVIA
ACGTTTATCTCATTTCAACAGCTCCAGAGTGTGCTAGTGGCAAGGTCGCTGACCGCTGACCGTGGCAAGGTTCCCGCAAGTTACCGC 2700
TVYLIIFNHVQSDASASGKGGHVRVTLAESRKLPR
GCCATGTTGCTGGGAGAGTCCAAAAGCGCAACAGCGCGCGCTTGGTGTAAACCGCACCGTGTGCGCAGTGAAGTGGCGTGGCGCTCCACT 2800
HVAHGEVAKANQAALRC**
TCATAATCCAGTTCGGTTCATACTTCTGCGCGTGGCGTAGACCGCGGAGGTTGAAGTCCAGAGATTGATCCGCGCTACAGATCTTCGCGAAATC 2900
TTGGCGCAACAG-2913

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